2014-1301

In The

United States Court Of Appeals

For The Federal Circuit

CUOZZO SPEED TECHNOLOGIES LLC,

Appellant,

v.

GARMIN INTERNATIONAL, INC.; GARMIN USA, INC.,

Appellees.

Appeal from the United States Patent and Trademark Office, Patent Trial and Appeal Board.

BRIEF OF APPELLANT

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FORM 9. Certificate of Interest

UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

Cuozzo Speed Technologies LLC v. Garmin International, Inc. et al.

No. 14-1301

CERTIFICATE OF INTEREST

Counsel for the (petitioner) (appellant) (respondent) (appellee) (amicus) (name of party) appellant certifies the following (use "None" if applicable; use extra sheets if necessary):

1. The full name of every party or amicus represented by me is:

Cuozzo Speed Technologies LLC

2. The name of the real party in interest (if the party named in the caption is not the real party in interest) represented by me is:

None

3. All parent corporations and any publicly held companies that own 10 percent or more of the stock of the party or amicus curiae represented by me are:

None

4. ☑ The names of all law firms and the partners or associates that appeared for the party or amicus now represented by me in the trial court or agency or are expected to appear in this court are:

John R. Kasha of Kasha Law LLC; Cabrach J. Connor of Taylor Dunham, LLP; Cabrach J. Connor of Reed & Scardino LLP; David Skeels of Friedman Suder & Cooke; and Kelly L. Kasha of Kasha Law LLC

March 7, 2014
Date

/John R. Kasha/
Signature of counsel

John R. Kasha
Printed name of counsel

Please Note: All questions must be answered
cc: Jennifer C. Bailey

CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing, PATENT OWNER CUOZZO'S CERTIFICATE OF INTEREST, was filed electronically on this 7th day of March, 2014, with the Clerk's Office of the United States Court of Appeals for the Federal Circuit:

United States Court of Appeals for the Federal Circuit
717 Madison Place, N.W., Suite 401
Washington, DC 20005

CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing, PATENT OWNER CUOZZO'S CERTIFICATE OF INTEREST, was served, in accordance with the parties' electronic service agreement, by electronic mail on this 7th day of March, 2014, on the following counsel of record for Petitioners Garmin International, Inc. et al.

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TABLE OF ABBREVIATIONS

Parties

Cuozzo	Patent Owner-Appellant Cuozzo Speed Technologies LLC
Garmin	Petitioners-Appellees Garmin International, Inc. and Garmin USA, Inc.

Terms

'074 Patent	U.S. Patent No. 6,778,074 to Cuozzo
AIA	Leahy-Smith America Invents Act
Aumayer	U.S. Patent No. 6,633,811 to Aumayer
Awada	U.S. Patent No. 6,515,596 to Awada
BRI	Broadest Reasonable Interpretation
Court	United States Court of Appeals for the Federal Circuit
Evans	U.S. Patent No. 3,980,041 to Evans
A__	Joint Appendix at page(s), with (column:lines) for patents
IPR	*Inter Partes* Review
Petition	Garmin's Petition for *Inter Partes* Review of '074 Patent
PTAB	Patent Trial and Appeal Board
PTO	United States Patent and Trademark Office
Tegethoff	German patent application publication no. DE 197 55 470 A1 to Tegethoff

Wendt	U.S. Patent No. 2,711,153 to Wendt

All emphasis in this brief is added unless otherwise indicated.

STATEMENT OF RELATED CASES

Pursuant to Federal Circuit Rule 47.5(a), appellant provides as follows:

(a) There have been no previous appeals in this proceeding.

(b) It is not aware of any other case that will be directly affected by the Court's decision in this case.

I. STATEMENT OF JURISDICTION

The PTAB had jurisdiction over Garmin's petition under 35 U.S.C. § 6. The PTAB issued a final written decision on November 13, 2013. A49. Cuozzo timely filed its notice of appeal on January 8, 2014. A421-423. This Court has jurisdiction under 28 U.S.C. § 1295(a)(4)(A) and 35 U.S.C. § 329.

II. STATEMENT OF THE ISSUES

1. Whether the PTAB lacked authority to institute IPR for claims 10 and 14 on grounds of unpatentability not identified in the Petition.
2. Whether the BRI standard applies to IPR, and whether the PTAB erred by construing the term "integrally attached" as "discrete parts physically joined together as a unit without each part losing its own separate identity" to exclude an embodiment of the invention?
3. Whether, if the PTAB had jurisdiction over claim 10, it erred in cancelling claim 10 as invalid under 35 U.S.C. § 103?
4. Whether the PTAB erred in denying Cuozzo's motion to amend the claims?

III. STATEMENT OF THE CASE

A. Preliminary Statement

This appeal arises from the first IPR instituted by the PTO under the AIA. In its Petition for IPR, Garmin challenged all claims (1-20) of the '074 Patent, alleging 43 different grounds of anticipation and obviousness based on several

patents alleged to be prior art. The PTAB rejected 41 of the grounds alleged by Garmin, instituting IPR on only two of the grounds identified for dependent claim 17. However, acting like a patent examiner rather than an adjudicator, the PTAB "exercised discretion" to apply those same two grounds to independent claim 10 and dependent claim 14, mapped the cited patents to claims 10 and 14, and instituted IPR as to claims 10 and 14. Ultimately, the PTAB cancelled claims 10, 14 and 17 based on the two grounds Garmin identified as to claim 17.

As part of instituting the IPR, the PTAB construed a single claim term, "integrally attached," and based on that construction, rejected 41 of the 43 grounds of unpatentability alleged by Garmin. Garmin did not provide any constructions for any claim terms in its Petition, and Cuozzo waived its right to file a pre-institution response to the Petition. Without any input on claim construction from the parties, the PTAB erred in its construction by (1) applying the BRI standard for application examination and patent reexamination, instead of the principles of *Phillips* set forth by the Court, (2) excluding an embodiment of the invention, and (3) disregarding the only testimony provided regarding the interpretation by a person of ordinary skill in the art at the time of the invention.

Based on its flawed claim construction, the PTAB denied Cuozzo's motion to amend the claims. The PTAB held that Cuozzo's proposed new independent claim did not have written description support, because it covered the embodiment

the PTAB excluded in its construction of "integrally attached." And, confusingly, the PTAB held that the new claim enlarged the scope of the originals claims, even though the new claim was a verbatim copy of original claim 10 and included limitations from other original dependent claims.

As the first appeal from the new IPR proceeding, it is extremely important that the Court provide guidance to the PTO about the adjudicatory nature of the proceeding and applicable claim construction standards. Thus, the Court should reverse the PTAB's final written decision cancelling claims 10, 14 and 17, or in the alternative, reverse and remand to the PTAB for reconsideration of Cuozzo's motion to amend based on a proper construction of "integrally attached."

B. Procedural History

On September 16, 2012, Garmin filed the first petition for IPR, requesting IPR with respect to all claims (1-20) of the '074 Patent. A145-148. For each claim, Garmin asserted multiple grounds of unpatentability. A152-153.

On January 9, 2013, the PTAB issued its Decision to Initiate Trial for Inter Partes Review only as to claims 10, 14 and 17 (A299-300), and on November 13, 2013, the PTAB issued its Final Written Decision cancelling claims 10, 14 and 17 and denying Cuozzo's motion to amend the claims. A49.

C. Statement of Facts

i. The Inventive Speed Limit Indicator Of The '074 Patent

The invention disclosed in the '074 Patent relates to "a new and improved speed limit indicator and method for displaying speed and the relevant speed limit that can be used for displaying the current speed of a vehicle and how it relates to the legal speed limit for the current location in which the vehicle is traveling." A55 (2:18-23). Implementations of the inventive speed limit indicator provide significant safety benefits, such as: (1) "allow[ing] the driver to always be aware of the current legal speed limit" without having to look for speed limit signs (A56 (3:63-65)); (2) "automatically notify[ing] the driver if he is speeding without requiring him to remove his eyes from the road" (A56 (4:3-6)); and (3) allowing the driver to determine quickly whether the vehicle's speed is exceeding the speed limit in the vehicle's current location by looking in a single location—the speed limit indicator (A52).

The '074 Patent describes and claims several embodiments of the inventive speed limit indicator. In all of the embodiments, the inventive speed limit indicator 10 comprises an integrated display of a speedometer 12 and a colored display 18, and a display controller that adjusts the colored display 18 to show speed readings in violation of the legal speed limit at the vehicle's present location (which may be

determined by a global positioning system receiver 22 or inertial navigation system). A57 (5:6-14; 5:26-39; 5:45-51; 6:6-8).

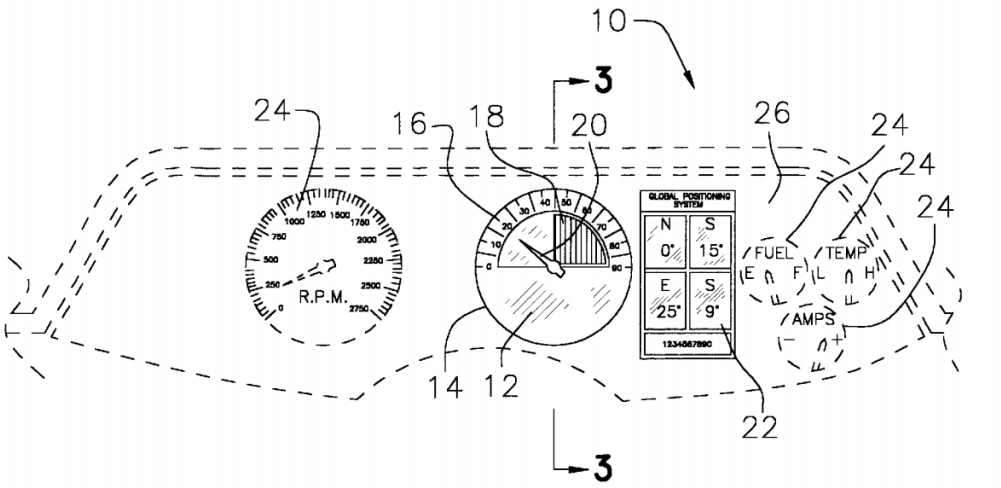


Figure 1 (reproduced above) of the '074 Patent depicts a "mechanical" embodiment of the speed limit indicator in which the speedometer display is an analog dial (comprising a backplate 14 with speed denoting markings 16 and a rotatable needle 20) and the colored display 18 is a rotatable, red plastic filter. A57 (5:8-12; Figure 1). Depending on the location of the vehicle, a "control unit adjusts the colored filter so that the speeds above the legal speed limit are displayed in red [] while the legal speeds are displayed in white []. This is accomplished by the control unit rotating the red filter disc [] to the appropriate degree." A57 (5:35-39).

The '074 Patent also describes an embodiment of the speed limit indicator in which the colored display is a liquid crystal display ("LCD"). A57 (6:11-14). In

this embodiment, the colored display is an LCD and the speedometer display may be an analog dial (e.g., backplate 14 with speed denoting markings 16 and rotatable needle 20) or a digital display (e.g., an LCD displaying digital representations of speed denoting markings and a rotating needle, or a numerical speed reading).

The '074 Patent further describes an "electronic" embodiment of the speed limit indicator in which the speedometer comprises an LCD. A57 (6:53-54); A58 (8:11-12). In this embodiment, the speedometer may include one LCD which can be the colored display (referred to as "the single LCD embodiment"). Alternatively, the speedometer may include one LCD that functions as a speedometer display (e.g., displaying digital representations of speed denoting markings and a rotating needle, or a numerical speed reading) and a separate LCD that is the colored display.

Claim 10, which encompasses all embodiments of the speed limit indicator which utilize a global positioning system receiver to determine the vehicle's present location, recites:

> 10. A speed limit indicator comprising:
> a global positioning system receiver;
> a display controller connected to said global positioning system receiver, wherein said display controller adjusts a colored display in response to signals from said global positioning system receiver to continuously update the delineation of which speed readings are in violation of the speed limit at a vehicle's present location; and
> a speedometer integrally attached to said colored display.

A58 (7:1-11).

The claims depending from claim 10 are directed to the various embodiments of the speed limit indicator. Claims 14-16 are directed to the mechanical embodiment ("said colored display is a colored filter" and the speedometer comprises "a needle," "a backplate," and "a plurality of speed denoting markings") (A58 (7:23-8:5), claim 12 is directed to the embodiment in which the colored display is an LCD (A58 (7:15-16), and claim 18 is directed to the electronic embodiment ("said speedometer comprises a liquid crystal display"). A58 (8:11-12).

ii. The Prosecution Of Claim 10 And The Claim Term "Integrally Attached"

During prosecution of the application that would mature into the '074 Patent, claim 11 (which would issue as claim 10) was amended to distinguish the invention over U.S. Patent No. 6,515,596 to Awada ("Awada"). A103. As shown below in Figure 1 of Awada, a numerical indicator 110 displaying the posted speed limit is mounted on a dashboard 107 of an automobile to the right of a steering wheel, and a warning light 120 for indicating when the vehicle's speed exceeds the posted speed limit is mounted directly behind the steering wheel. A261 (Fig. 1); A265 (2:24-32).

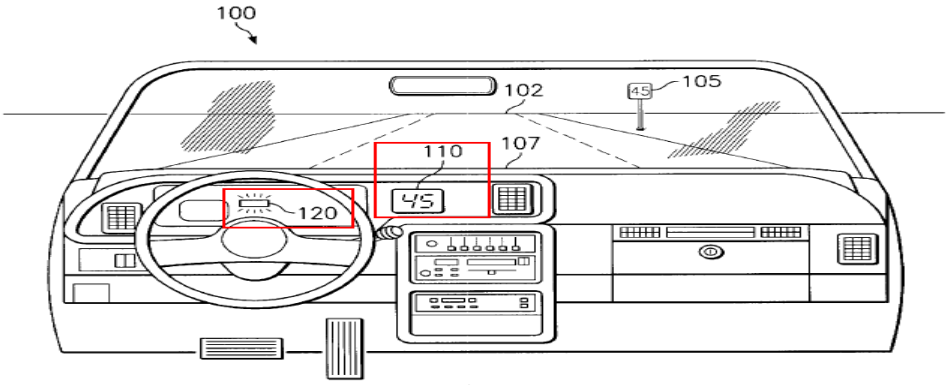


FIG. 1

Claim 11 was amended to recite, inter alia, "a speedometer integrally attached to said colored display." A103 (emphasis in original). The support for the amendment was provided in Figures 1, 3 and 4 of the application and the following statements:

> "Speedometer 12 has a backplate 14 made of plastic, speed denoting markings 16 painted on backplate 14, a colored display 18 made of a red plastic filter, and a plastic needle 20 rotatably mounted in the center of backplate 14"; and
>
> "More particularly, the speed limit indicator and method for displaying speed and the relevant speed limit 10 has a housing 28 containing backplate 14, colored display 18, axle 30, needle 20, and display controller 36."

A103; A72-73; A82; A84.

Awada was distinguished on lacking an integrated display of a speedometer and the colored display:

> The cited Awada (6,515,596) lacks a speedometer integrally attached to the speed limit display (column 2, lines 40-42 and Figs. 1 and 4-6). The vehicle's driver is forced to look in two separate locations and then mentally compare the speed limit with his vehicle's speed to determine how close he is to speeding if he is not already doing so

> sufficiently to activate the light and/or tone. This significant complexity could be distracting to the driver, thereby increasing the risk of an accident. In contrast, the present invention provides an integrated display allowing the driver to immediately ascertain both his speed and its relation to the prevailing speed limit.

A103.

No other arguments were made with respect to Awada, and the Examiner allowed the amended claims without comment. A124. Amended claim 11 issued as claim 10 of the '074 Patent.

iii. Garmin Files The First Ever Petition For IPR

On September 16, 2012, Garmin filed the very first petition for IPR, requesting IPR with respect to all claims (1-20) of the '074 Patent. A145-148. Garmin did not propose any claim constructions in its Petition, alleging only that the claim terms should be interpreted based on a complaint Cuozzo filed against Garmin in federal district court and the specification of the '074 Patent. A153-154. Garmin alleged unpatentabilty of claims 10, 14 and 17 based solely on the following grounds:

Claim No.	Proposed Statutory Rejections for the '074 Patent
10	Claim 10 is anticipated under § 102(e) by Aumayer
10	Claim 10 is obvious under § 103(a) over Tegethoff in view of Awada
10	Claim 10 is obvious under § 103(a) over Tokunaga in view of Hamamura
14	Claim 14 is obvious under § 103(a) over Aumayer in view of Evans
14	Claim 14 is obvious under § 103(a) over Tegethoff in view of Awada and in further view of Evans
17	Claim 17 is obvious under § 103(a) over Aumayer in view of Evans and in further view of Wendt

Claim No.	Proposed Statutory Rejections for the '074 Patent
17	Claim 17 is obvious under § 103(a) over Tegethoff in view of Awada and in further view of Evans and further view of Wendt

A152-153.

Cuozzo waived its right to file a preliminary response to Garmin's petition. A275-276.

iv. The PTAB Institutes IPR

On January 9, 2013, the PTAB issued its Decision to Initiate Trial for Inter Partes Review construing the claim term "integrally attached" and, based on its construction, instituting IPR solely as to claims 10, 14 and 17. A299-301. With regard to claims 10 and 14, the PTAB denied all of the grounds of unpatentability alleged by Garmin but "exercise[d] discretion" to apply the grounds Garmin alleged for claim 17 (dependent directly from 14 and indirectly from 10) to claims 10 and 14. A292-293; A296. The PTAB denied Garmin's petition in all respects, except as to claims 10, 14 and 17 "on the alleged ground of obviousness over Aumayer, Evans, and Wendt under 35 U.S.C. § 103" and "alleged basis of obviousness over Tegethoff, Awada, Evans, and Wendt under 35 U.S.C. § 103." A299-301.

1. The PTAB's construction of "integrally attached" under the BRI standard

Relying on 37 C.F.R. § 42.100(b), the PTAB construed the claim term "integrally attached" under the BRI standard to mean "the two elements

[speedometer and colored display] are discrete parts physically joined together as a unit without each part losing its own separate identity." A282. The only stated support for the PTAB's construction was the description of colored display 18 as "a separate item from backplate 14 and speed denoting marking 16 on backplate 14"; the requirement in claim 1 "that the display controller adjusts the colored display independently of the speedometer"; and the statement in the prosecution history identifying support for the "integrally attached" amendment. A282.

The PTAB never addressed the embodiments of the invention in which the "colored display described herein could also take the form of a liquid crystal display" (A56 (3:3-6); A57 (6:11-14); A57 (5:35-36); A58 (7:16-17)) or the "speedometer comprises a liquid crystal display" (A57 (6:53-54); A58 (8:11-12)). However, the PTAB specifically noted that its construction would not "cover the case of a single electronic display that itself operates both as a speedometer and a colored display." A282.

2. The PTAB initiates IPR as to claims 10 and 14 on grounds not identified in Garmin's Petition

The PTAB expressly denied all of Garmin's alleged grounds of unpatentability as to claims 10 and 14, but instituted IPR as to these claims on grounds raised solely with respect to dependent claim 17.

As to claim 10, Garmin alleged unpatentabilty on three separate grounds: (1) anticipated by Aumayer, (2) obvious over Tegethoff in view of Awada, and (3)

obvious over Tokunaga in view of Hamamura, (A276-277), and the PTAB expressly denied all three grounds:

> **ORDERED** that the Petition is *denied* as to claims 1, 2, 6, 7, 8, 9, 10, 11, 12, 13, and 18-20 of the '074 patent on the alleged ground of anticipation by Aumayer under 35 U.S.C. § 102(e)…
>
> **FURTHER ORDERED** that the Petition is *denied* as to claims 8-13 and 18-20 on the alleged ground of obviousness over Tegethoff and Awada under 35 U.S.C. § 103…
>
> **FURTHER ORDERED** that the Petition is *denied* as to claims 10 and 20 on the alleged ground of obviousness over Tokunaga and Hamamura under 35 U.S.C. § 103.

A299-300.

Similarly, the PTAB expressly denied both of Garmin's alleged grounds of unpatentability as to claim 14. A300.

Despite denying all of Garmin's alleged grounds of unpatentability as to claims 10 and 14 and admitting "that Petitioner did not specifically articulate a ground of unpatentability against claims 10 and 14 based on Aumayer, Evans and Wendt," the PTAB determined that, due to the dependency of claim 17 directly from claim14 and indirectly from claim 10, "we exercise discretion to recognize that the assertion was implicitly made by Petitioner's alleging that claim 17 would have been obvious over Aumayer, Evans, and Wendt." A292-293. The PTAB similarly exercised its discretion to apply the other ground of unpatentability asserted by Garmin as to claim 17 to claims 10 and 14. A296. The PTAB did not

provide any justification in statute, rule or case law for its exercise of discretion and did not perform a similar analysis for any claim other than claim 17.

v. The PTAB Issues Its Final Decision Cancelling Claims 10, 14, And 17 And Denying Cuozzo's Motion To Amend The Claims

On November 13, 2013, the PTAB issued its Final Written Decision cancelling claims 10, 14 and 17 and denying Cuozzo's motion to amend the claims. A49.

The PTAB maintained its construction of "integrally attached." A9. Seemingly contrary to its construction, the PTAB acknowledged that (1) "integrally attached" does not preclude sharing of components by the speedometer and colored display (A9), (2) the specification expressly states that "[s]pedometer 12 has…a colored display" (A11) and (3) Prof. Morris, an expert in the field of the invention, opined, without rebuttal, "that it would be natural for one skilled in the art at the time of the invention to combine the speedometer readout with the speed limit information on the LCD" (A13-14).

The PTAB cancelled claims 10, 14 and 17 based on both grounds of unpatentability asserted by Garmin as to claim 17. A49. In particular, the PTAB held that both Aumayer and Awada were prior art under 35 U.S.C. § 102(e)(2), finding that Cuozzo had not demonstrated reasonable diligence from conception on

December 8, 2000 to constructive reduction to practice on March 18, 2002. A23; A25.

Finally, the PTAB denied Cuozzo's motion to amend the claims. A49. Cuozzo moved to substitute new claims 21-23 for original claims 10, 14 and 17. A47. New independent claim 21 recited all of the limitations of original claim 10 *verbatim*, but incorporated the limitations of original claims 12 and 18 to recite, "wherein the speedometer comprises a liquid crystal display, and wherein the colored display is the liquid crystal display." A47. The PTAB held that the added limitations in new claim 21 "enlarge the scope of the respective original patent claims which they replace," because the PTAB's construction of "integrally attached" excludes using a single liquid crystal display as a speedometer display and the colored display. A48.

IV. SUMMARY OF THE ARGUMENT

The PTAB lacked authority to review claims 10 and 14 on grounds not identified in the Petition. Garmin's Petition challenged independent claim 10 on three separate grounds: (1) anticipation by Aumayer, (2) obvious over Tegethoff in view of Awada, and (3) obvious over Tokunaga in view of Hamamura. A276-277. In the order instituting the IPR, the PTAB denied all three grounds. However, the PTAB "exercised discretion" to apply the grounds alleged as to claim 17 (dependent indirectly from claim 10) to claims 10 and 14.

Under the law and PTO rules, an IPR cannot be instituted unless the petition supporting the grounds shows that the petitioner would prevail. Here, there was no "information presented in the petition" that could possibly show Garmin would prevail with respect to its challenge of claim 10, because the PTAB expressly denied all of Garmin's challenges to claim 10. Unlike reexamination, the PTAB cannot initiate an IPR or raise a new ground of unpatentability in an IPR. Thus, the PTAB exceeded its authority by instituting IPR, on its own initiative, as to claims 10 and 14 on grounds not identified in the Petition.

The PTAB erred in its construction of "integrally attached" by applying the examinational BRI standard and excluding the single LCD embodiment of the invention. Congress has not granted the PTO substantive rulemaking authority. Section 2 sets out the PTO's "[p]owers," authorizing the PTO to "establish regulations [that] govern the conduct of proceedings in the Office." *Id*. § 2(b)(2). This authorization to regulate "conduct," permits only "procedural" rulemaking. But in connection with IPR, the PTO promulgated 37 C.F.R. § 42.100(b), which provides that "[a] claim in an unexpired patent shall be given its broadest reasonable construction in light of the specification of the patent in which it appears." This new regulation determines how claim terms are construed which affects substantive outcomes (patentability, enlargement of claim scope in a motion

to amend, etc.), not merely procedural conduct. In adjudicatory proceedings like IPR, the standard enunciated in *Phillips* governs claim construction.

The PTAB construed "integrally attached" as "discrete parts physically joined together as a unit without each part losing its own separate identity," which excludes the single LCD embodiment of the invention in which the speedometer includes an LCD that is the colored display. The PTAB's construction is based on its incorrect position that the colored display cannot be a component of the speedometer. The specification expressly states, "[s]peedometer 12 ***has***…a colored display," and the colored display can be an LCD. That alone, is sufficient to interpret "integrally attached" broadly to encompass the single LCD embodiment.

The PTAB's construction contains several narrow limitations ("discrete parts," "physically joined," and "without each part losing its own separate identity") which are not found in the ordinary meaning of the term "integrally attached," and the PTAB has not cited any source for these limitations, seemingly conjuring them from thin air. The PTAB has not explained what the "identity" of the speedometer is or how it might lose its identity. And, the PTAB mischaracterizes the unrebutted testimony of Cuozzo's expert, Prof. Morris, as to the meaning of "integrally attached" to one of skill in the art at the time of the invention.

The PTAB erred in cancelling claim 10.[1] A fundamental question is whether the PTAB needs to provide any justification for its conclusion that motivation exists to combine references. The PTAB cancelled claim 10 based on two separate combinations of cited references: Aumayer/Evans/Wendt and Tegethoff/Awada/Wendt/Evans. Wendt (from 1951) is a rotatable pointer on a suction cup that can be fixed to a glass cover of a conventional, mechanical speedometer display. Evans (from 1974) is a red plastic plate that is fixed with glue or rubber cement to a cover of a conventional, mechanical speedometer display. Aumayer and Tegethoff (from the late 1990s) are computer-based digital speedometer displays.

In the institution order, the PTAB admitted that there was no support in the petition for combining Evans with Aumayer or Tegethoff. However, the PTAB held that Wendt's rotatable pointer provides the motivation to combine Evan's plastic plate together with the digital speedometer displays of Aumayer and Tegethoff. In its Final Decision, the PTAB held that Evans and Wendt together disclose a manually movable red plate which can be improved "by adding automatic control if the dynamic settings are automatically determinable, as in the case of Aumayer's device." But, importantly, the PTAB has not indicated how "automatic control" could be added to the manual devices of Evans and Wendt, or

[1] For the purposes of this appeal, claims 10, 14 and 17 rise and fall together.

what "dynamics settings [that] are automatically determinable" refers to. A conclusory statement as to motivation to combine is insufficient to establish a prima facie case of obviousness.

The PTAB erred in denying Cuozzo's motion to amend the claims. Cuozzo filed a motion to replace claim 10 with proposed substitute claim 21, a *verbatim* copy of claim 10, with two additional limitations copied from the original dependent claims. Based on its erroneous interpretation of "integrally attached" as excluding the single LCD embodiment, the PTAB held that claim 21 failed to provide written description support under 35 U.S.C. § 112, first paragraph and further, improperly enlarged the scope of the claims. A proper construction will resolve the § 112 issue, but the PTAB did not explain how new claim 21 (which is old claim 10 verbatim with additional limitations) could possibly be found to enlarge the scope of the claims. If the Court adopts Cuozzo's claim construction of "integrally attached" or otherwise reverses the PTAB's construction, a remand is appropriate for consideration of the motion to amend.

V. ARGUMENT

A. Standard Of Review

The PTAB's legal conclusions (including as to claim construction), statutory interpretation and questions of jurisdiction are reviewed *de novo*. *Belkin International, Inc. v. Kappos*, 696 F.3d 1379, 1381 (Fed. Cir. 2012). The PTAB's

interpretation of PTO regulations is entitled to substantial deference, unless the interpretation is "plainly erroneous or inconsistent with the regulation." *In re Garner*, 508 F.3d 1376, 1378 (Fed. Cir. 2007). The PTAB's determination of obviousness is reviewed *de novo* and the factual findings for substantial evidence. *In re Gartside*, 203 F.3d 1305, 1316 (Fed. Cir. 2000). The "existence of a reason for a person of ordinary skill to combine references" is a question of fact. *In re Constr. Equip. Co*., 665 F.3d 1254, 1255 (Fed. Cir. 2011). Substantial evidence is "such relevant evidence as a reasonable mind might accept as adequate to support a conclusion." *Consol. Edison Co. v. N.L.R.B*., 305 U.S. 197, 229 (1938).

B. The PTAB Lacked Authority To Review Claims 10 And 14 On Grounds Not Identified In The Petition

i. IPR is an adjudicatory trial, not an examinational proceeding

With the AIA, Congress intended to "convert[] inter partes reexamination from an examinational to an adjudicative proceeding and rename[] the proceeding 'inter partes review.'" H.R. Rep. No. 112-98, pt. 1, at 46-48 (2011). While couched as a "conversion" and bearing some superficial procedural similarity to *inter partes* reexamination, IPR is based on a fundamentally different premise – it is an adjudicatory trial before the PTAB, not an examinational proceeding before an examiner. Further, unlike *inter partes* reexamination, IPR provides for discovery and depositions of declarants, grants the patent owner only a single,

significantly limited opportunity to amend the claims or add new claims, and allows parties to terminate the proceeding based on settlement. 35 U.S.C. §§ 316, 317.

A brief overview of *inter partes* reexamination and IPR explicates the stark contrast between the proceedings:

On November 29, 1999, the American Inventors Protection Act amended the reexamination statute to provide an *inter partes* option. AIPA Public Law 106-113; 35 U.S.C. § 311-318 (1999). Under this option, a third party requester was permitted to file a request for reexamination alleging a substantial new question of patentability for at least one claim of an issued patent. 35 U.S.C. § 311 (1999). An examiner in the Central Reexamination Unit would review the request and determine whether it should be granted. MPEP 2633 (Rev. 7, July 2008). If the request was granted, the examiner issued a first Office action setting forth the grounds on which the reexamination would proceed. MPEP 2633 (Rev. 7, July 2008). The patent owner was permitted to file a response to the first Office action, including amending the granted claims and adding new claims, and the requestor was permitted to file written comments addressing the first Office action and the patent owner's response. 35 U.S.C. § 314 (1999). This cycle, action-response-comment, would repeat until the examiner issued an Office action closing prosecution. 37 C.F.R. § 1.949 (old). Upon issuance of the Office action closing

prosecution, the patent owner and/or the requester were permitted to appeal the examiner's action to the Board of Patent Appeals and Interferences (now the PTAB). 35 U.S.C. § 315 (1999). Thus, *inter partes* reexamination was substantially similar to examination of a patent application, but for the participation of the requestor.

Notably, in *inter partes* reexamination, the examiner was not limited to issues raised by the requester and was free to, at any time, perform a prior art search and formulate a new rejection for any claim of the patent. *Belkin*, 696 F.3d at 1383; MPEP 2658 (Rev. 7, July 2008). In *Belkin*, the Court held that under 35 U.S.C. § 303(a), "the scope of reexamination may encompass those issues that raise a substantial new question of patentability, whether proposed by the requester or the Director, but, unless it is raised by the Director on his own initiative, it only includes issues of patentability raised in the request under § 311 that the Director has determined raise such an issue." *Belkin*, 696 F.3d at 1383. Thus, 35 U.S.C. § 303(a) gave the PTO broad discretionary powers to institute reexamination on any claims on any grounds.

IPR is a completely different animal.

An IPR is a trial – "a contested case instituted by the Board based upon a petition." 37 C.F.R. § 42.100(a); 37 C.F.R. § 42.2 (defining "trial"). Patent interferences, formerly administered under part 42 of title 37, are not "trials." 37

C.F.R § 42.2 (definition of "trial"). Similarly, reexaminations, administered under part 1 of title 37, are not "trials."

An IPR is presided over from start to finish by a panel of at least three administrative patent judges of the PTAB. 35 U.S.C. § 6(c). Examiners do not have any role in IPR, and there is no law or regulation allowing the PTAB to perform examinational actions, such as searching for prior art or formulating grounds of rejection.

An IPR is initiated only when "a person who is not the owner of the patent" (35 U.S.C. § 311) files a detailed petition that, *inter alia*, identifies with particularity, "the grounds on which the challenge to each claim is based, and the evidence that supports the grounds for the challenge to each claim." 35 U.S.C. § 312(a)(3). In particular, for each challenged claim, the petition must include a statement identifying, *inter alia*, "[t]he specific statutory grounds under 35 U.S.C. 102 or 103 on which the challenge to the claim is based" and "where each element of the claim is found in the prior art patents or printed publications relied upon." 37 C.F.R. § 42.104(b)(2), (5). During the March 2011 debates on the AIA, Senator Kyl noted that, "by requiring petitioners to tie their challenges to particular validity arguments against particular claims, the new threshold [reasonable-likelihood-of-success] will prevent challenges from 'mushrooming' after the review is instituted into additional arguments employing other prior art to attacking other claims." 157

Cong. Rec. at S1376 (daily ed. Mar. 8, 2011); *see also id*. at S1041–42 (daily ed. Mar. 1, 2011) (statement of Sen. Kyl).

An IPR will not be instituted "unless the Director determines that the information presented in the petition…shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition." 35 U.S.C. § 314(a). In particular, "[i]nter partes review shall not be instituted for a ground of unpatentability unless the Board decides that the petition supporting the ground would demonstrate that there is a reasonable likelihood that at least one of the claims challenged in the petition is unpatentable." 37 C.F.R. § 42.108(c).

If an IPR is instituted, the patent owner is permitted discovery of relevant evidence including deposition of petitioner's declarants and the option of submitting a response, with supporting declarations, to the petition. 35 U.S.C. § 316(a)(8); 37 C.F.R. § 42.51; 37 C.F.R. § 42.120. If the patent owner files a response, the petitioner is permitted discovery of relevant evidence including deposition of the patent owner's declarants and may file a reply to the patent owner's response. 35 U.S.C. § 316(a)(13); 37 C.F.R. § 42.51. The PTAB may hold an oral hearing, if requested, and will issue a final written decision.

Two features of IPR are new to PTO proceedings: the motion to amend the claims and termination based on settlement. After institution of an IPR, the patent

owner has the right to make one motion to amend the claims to cancel a challenged claim or propose a reasonable number of substitute claims. 35 U.S.C. § 316(a)(9); 37 C.F.R. § 42.121. If the patent owner files such a motion, the petitioner may file an opposition. 37 C.F.R. § 42.23. In a recent decision in an IPR, the PTAB stated that a motion to amend proposing substitute claims will not be entered unless the patent owner demonstrates the patentability of the substitute claims by adding a narrowing feature to a challenged claim and explaining that such feature is not known in the prior art of record and all prior art known by the patent owner. *Idle Free Systems, Inc. v. Bergstrom, Inc*., IPR2012-00027, Paper 26, pp. 7-8 (PTAB Jun. 11, 2013). It is worth noting that, according to the PTO Trial Proceeding Statistics, in thirty-three IPRs where a final written decision has been issued, not a single motion to amend has been granted. http://www.uspto.gov/ip/boards/bpai/stats/aia_statistics_04_17_2014.pdf (last visited April 19, 2014).

An IPR shall be terminated as to a petitioner based on a settlement unless the PTAB has made a final decision on the merits prior to a request to terminate being filed. 35 U.S.C. § 317(a). But, even if there is no petitioner in an IPR, the PTAB may proceed to a final written decision. *Id*. Indeed, the PTAB has rendered several decisions even after terminating all petitioners from the proceeding. *See, e.g., Blackberry Corp. v. MobileMedia Ideas LLC*, IPR2013-00016, Paper 31

(PTAB Dec. 11, 2013); *Blackberry Corp. v. MobileMedia Ideas LLC*, IPR 2013-00036, Paper 64 (PTAB Jan. 21, 2014).

ii. The PTAB does not have discretion to create a new ground of rejection for a claim in an IPR

1. Statute and PTO regulation limit institution to grounds raised in the petition

The statutory language requires an IPR petition to identify specific grounds of alleged unpatentability. A petition for IPR must "identify, in writing and with particularity, each claim challenged, the grounds on which the challenge to each claim is based, and the evidence that supports the grounds for the challenge to each claim." 35 U.S.C. § 315(a)(3). The "grounds" refers to an allegation of unpatentability under 35 U.S.C. § 102 or § 103 based on prior art patents or printed publications. 35 U.S.C. § 311(b). Thus, a proper ground of alleged unpatentability is, for example, "claim 1 is unpatentable under 35 U.S.C. § 102 based on prior art patent X." Following the statutory requirements, Garmin's Petition challenged claim 10 on three separate grounds: (1) anticipation by Aumayer, (2) obvious over Tegethoff in view of Awada, and (3) obvious over Tokunaga in view of Hamamura. A276-277.

An IPR can only be instituted on grounds raised in the petition. Pursuant to 35 U.S.C. § 314(a), "[t]he Director may not authorize an inter partes review to be instituted unless the Director determines that ***the information presented in the***

petition filed under section 311…shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition." 35 U.S.C. § 314(a) (emphasis added). The "information presented in the petition" must refer back to the "grounds" of unpatentability alleged in the petition. That is, 35 U.S.C. § 312(a) identifies all of the statutory requirements for a petition for IPR, but the only requirement which could possibly "show[] that there is a reasonable likelihood that the petition erwould prevail" is the requirement to identify the specific grounds of alleged unpatentability. For example, 35 U.S.C. § 312(a)(1) requires the payment of a fee accompanying an IPR petition, but the "fee" is not "information" that could show whether the petitioner may prevail. Here, there was no "information presented in the petition" that could possibly show Garmin would prevail with respect to its challenge of claim 10, because the PTAB expressly denied all of Garmin's challenges to claim 10. A299-300.

The PTAB's institution decision must also take into account a patent owner preliminary response. 35 U.S.C. § 313. The patent owner may file a preliminary response to the petition "set[ting] forth reasons why no inter partes review should be instituted based upon the failure of the petition to meet any requirement of this chapter." *Id*. Obviously, if the PTAB is permitted to gin up any ground of unpatentability as to any challenged claim, the patent owner's preliminary response

is worthless. The patent owner would either have to guess at which grounds the PTAB might formulate or address every possible permutation of statutory and prior art grounds identified in the petition. Prior to institution, how could Cuozzo have possibly known that the PTAB would apply to claims 10 and 14 the grounds of rejection alleged as to dependent claim 17, especially when claim 17 depends directly from claim 14, which depends directly from independent claim 10 and Garmin alleged different grounds of unpatentability with respect to each claim?

The legislative history of the AIA supports Cuozzo's interpretation of 35 U.S.C. § 314(a). During the March 2011 debates on the AIA, Senator Kyl noted that, "by requiring petitioners to tie their challenges to particular validity arguments against particular claims, the new threshold [reasonable-likelihood-of-success] will prevent challenges from 'mushrooming' after the review is instituted into additional arguments employing other prior art to attacking other claims." 157 Cong. Rec. at S1376 (daily ed. Mar. 8, 2011); *see also id*. at S1041–42 (daily ed. Mar. 1, 2011) (statement of Sen. Kyl). Contrary to Congress's express intent, the PTAB "mushroomed" this IPR by "employing other prior art [raised as to dependent claim 17] to attack other claims [claims 10 and 14]."

The IPR regulations promulgated by the PTO further support Cuozzo's interpretation. Under 37 C.F.R. § 42.108(c), "[i]nter partes review shall not be instituted for a ground of unpatentability unless the Board decides that the petition

supporting the ground would demonstrate that there is a reasonable likelihood that at least one of the claims challenged in the petition is unpatentable." This regulation makes clear that IPR is instituted on a ground-by-ground basis for each challenged claim, and IPR cannot be instituted as to the ground unless the petition meets the threshold for institution. Here, the grounds of unpatentability formulated by the PTAB as to claim 10 were not identified in the Petition, and thus, it is impossible that there was any support in the Petition for such grounds.

2. The PTO cannot institute IPR on its own initiative

The PTO cannot initiate an IPR. Under 35 U.S.C. § 311(a), only a "person who is not the patent owner" may file a petition for IPR, and the PTO is not a "person" under the statute. Under 37 C.F.R. § 42.101, the "person who is not the patent owner" is referred to as the "petitioner," which is defined in 37 C.F.R. § 42.2 as "the party filing a petition requesting that a trial be instituted." The regulations define "party" as "at least the petitioner and the patent owner" and do not make any reference to the PTO. 37 C.F.R. § 42.2.

The PTO cannot raise a new ground of unpatentability in an IPR. 35 U.S.C. § 303 is expressly limited to reexamination, and there is no analogous statute or regulation which would permit the Director to propose a new ground of rejection in an IPR.

iii. Issues of subject matter jurisdiction must be addressed

A federal appellate court must review issues of jurisdiction, even if such issues were not raised in the lower court proceeding. *John R. Sand & Gravel Co. v. United States*, 457 F.3d 1345, 1353 (Fed. Cir. 2006). Cuozzo admits that it did not raise the issue of the PTO's subject matter jurisdiction over claims 10 and 14, but only because it was precluded from doing so by PTO regulation. Pursuant to 37 C.F.R. § 42.120(a), after institution of an IPR, "[a] patent owner may file a response to the petition addressing any ground for unpatentability not already denied." There is no mechanism by which to address jurisdictional issues after institution, because a determination about whether to institute IPR is "final and nonappealable." 35 U.S.C. § 314(d). Unlike reexamination (37 C.F.R. § 1.181), the PTO has not promulgated any regulation permitting a petition to the Director for review of a decision instituting IPR.

In view of the statutory mandate to issue a final written decision in an IPR not later than one year after institution (35 U.S.C. § 316(a)(11)), the "final and nonappealable" nature of the institution decision was clearly intended to prevent immediate Federal Circuit review at the outset of the proceeding. Joe Matal, A Guide to the Legislative History of the America Invents Act: Part II of II, 21 Fed. Cir. Bar J. 539, 616 (2012) ("the AIA should eliminate Federal Circuit appeals over whether a petition for review met the substantive standards for starting a

proceeding"). If the institution decision was appealable, presumably every IPR proceeding would involve at least one appeal to the Federal Circuit upon institution and a second appeal upon a final decision.

There is a "'strong presumption'" against finding that Congress intended to prohibit judicial review of agency action. *Pregis Corp. v. Kappos*, 700 F.3d 1348, 1358 (Fed. Cir. 2012). Here, § 314(d) serves two purposes (1) allowing the PTAB to proceed to final decision no later than one year after institution, and (2) preventing serial appeals to the Federal Circuit. But § 314(d) does not suggest that the PTAB has unchecked, unreviewable discretion to unilaterally determine the scope of its power, especially when PTO has not provided any regulations for redress via petition (like in reexamination).

C. The PTAB Erred In Its Construction Of "Integrally Attached" By Applying The Incorrect Standard And Excluding The Single LCD Embodiment Of The Invention

i. The PTO erred by applying the BRI Standard

1. The PTO lacked substantive rulemaking authority to require use of the BRI standard in IPR

Congress has not granted the PTO substantive rulemaking authority. Section 2 sets out the PTO's "[p]owers," authorizing the PTO to "establish regulations [that] govern the conduct of proceedings in the Office." *Id*. § 2(b)(2). This authorization to regulate "conduct," which constitutes "the broadest of the Office's rulemaking powers," permits only "procedural" rulemaking. *Cooper Techs. Co. v.*

Dudas, 536 F.3d 1330, 1335 (Fed. Cir. 2008); *Tafas v. Doll*, 559 F.3d 1345, 1352 (Fed. Cir. 2009).

But in connection with IPR, the PTO promulgated 37 C.F.R. § 42.100(b), which provides that "[a] claim in an unexpired patent shall be given its broadest reasonable construction in light of the specification of the patent in which it appears." This new regulation determines how claim terms are construed which affects substantive outcomes (patentability, enlargement of claim scope in a motion to amend, etc.), not merely procedural conduct. *Cooper*, 536 F.3d at 1335.

The PTAB cannot find authority for this regulation in 35 U.S.C. § 316, because no provision in the statute is directed, expressly or implicitly, to claim construction. The Court has already held that the "conduct of proceedings" addressed in § 2 covers only procedural regulations. *Cooper*, 536 F.3d at 1335. Given this holding, it is incongruous to think that the "[c]onduct of inter partes review" addressed in § 316 covers substantive regulations.

Furthermore, nothing in § 316 suggests that this new section provides the PTO with authority to override *Phillips v. AHW Corp*., 415 F.3d 1303, 1312-19 (Fed. Cir. 2005) (en banc), to alter the legal rules governing claim construction, or import an "examination expedient" into the AIA's new adjudicatory trials. *In re Skvorecz*, 580 F.3d 1262, 1267 (Fed. Cir. 2009). Had Congress intended to dramatically expand the PTO's rulemaking authority to encompass substantive

regulations, it would have amended § 2(b)(2). Its failure to do so leaves 37 C.F.R. § 42.300(b) *ultra vires*.

ii. The BRI standard is not appropriate for an IPR adjudicatory trial

In adjudicatory proceedings, the standard enunciated in *Phillips* governs claim construction. 415 F.3d at 1312-19. In examinational proceedings, this Court has permitted use of the so-called "broadest reasonable interpretation" or "BRI" standard. *Skvorecz*, 580 F.3d at 1267. But as the Court explained, the BRI

> protocol is solely an examination expedient, not a rule of claim construction. Its purpose is to facilitate exploring the metes and bounds to which the applicant may be entitled, and thus to aid in sharpening and clarifying the claims during the application stage, when claims are readily changed.

Id. Notwithstanding this Court's directive that BRI is "solely an examination expedient," the PTAB improperly extended this standard to the IPR adjudicatory trial. A8.

Examination and reexamination bear no substantive similarity to IPR. Patentees in (re)examinations have the right to make "any amendment," *In re Yamamoto*, 740 F.2d 1569, 1572 (Fed. Cir. 1984), but patent holders in AIA trials have no such right – only a limited opportunity to "file 1 motion to amend the patent." 35 U.S.C. § 316(d). And the PTAB is free to deny that motion whenever it decides that the patent owner has not met "the burden to show entitlement to the relief requested." 37 C.F.R. § 42.20(c). Further, to the extent the PTAB permits

amendment, it is limited to cancelling claims or substituting one issued claim for one amended claim. 37 C.F.R. § 42.221. This motion-practice procedure – again highlighting the adjudicatory nature of the IPR trial – differs radically from the right to amend claims in the examinational context, and does not justify use of the BRI standard.

D. The PTO's Construction Of "Integrally Attached" Is Incorrect Under The BRI Standard And *Phillips*

The PTAB construed "integrally attached" as "discrete parts physically joined together as a unit without each part losing its own separate identity." Cuozzo's fundamental dispute with the PTAB's construction is that it excludes the single LCD embodiment of the invention in which the speedometer includes an LCD that is the colored display. Because the PTAB's overly narrow and unsupported construction excludes the single LCD embodiment and is contrary to ordinary meaning of the term, the Court should reject the PTAB's construction and adopt the construction proposed by Cuozzo – "joined or combined to work as a complete unit."

i. The colored display is a component of the speedometer

Claim 10 requires "a speedometer integrally attached to said colored display." A58 (7:11). The specification repeatedly describes the colored display as one of the many components of the speedometer.

Figure 1 shows a current embodiment of the speed limit indicator 10 according to the invention which has a speedometer 12. A57 (5:6-8). The specification expressly states, "***[s]peedometer 12 has*** a backplate 14 made of plastic, speed denoting markings 16 painted on backplate 14, ***a colored display 18*** made of a red plastic filter, and a plastic needle 20 rotatably mounted in the center of backplate 14." A57 (5:8-10). Clearly, like the speed denoting markings 16 and the needle 20, the colored display 18 is a component joined or combined with the speedometer 12 to work as a unit, i.e., the speed limit indicator 10 that provides an integrated display for the driver.

Figure 2 shows a block diagram of a method used by the speed limit indicator 10 depicted in Figure 1. Steps 50 and 52 describe adjustment of the speedometer based on the speed limit information – "[50] vehicle speed above posted speed limit is displayed on ***red speedometer region***" and "[52] vehicle speed up to speed limit is displayed on ***white speedometer region***." A53. Steps 50 and 52 provide clear support for the conclusion that the colored display is a component of the speedometer. If the colored display was a separate physical part from the speedometer, then steps 50 and 52 would have been written as "red/white colored display region."

The PTAB characterizes the specification as "disclos[ing] that colored display 18, in the form of a red plastic filter, is a separate item from backplate 14,

speed denoting marking 16 on backplate 14, and needle 20, which form a speedometer separate from the red plastic filter." A11. Cuozzo agrees with the first part of the PTAB's characterization – the colored display 18 is described as a separate item from backplate 14, speed denoting marking 16 on backplate 14, and needle 20. However, the second part of the PTAB's characterization is blatantly incorrect – according to the specification, all of these separate components (backplate 14, speed denoting marking 16, needle 20 and colored display 18) are part of the speedometer 12, because the speedometer 12 "has" all of these components. Thus, contrary to the PTAB's assertion, the '074 Patent does not include any statement requiring that the speedometer is separate from the colored display.

In fact, the PTAB admits that the specification states "that speedometer 12 includes colored display 18, which appears contrary to the Board's construction of 'integrally attached.'" A11. However, the PTAB never reconciles its construction with this glaring inconsistency, contending that the contradiction cannot be evaluated because the specification does not use the term "integrally attached." A11-12.

Because the PTAB's construction rests on a fundamental misreading of the specification, it must be overturned.

ii. The PTAB's construction is contrary to the ordinary meaning of the term as understood by one of skill in the art at the time of the invention

The PTAB's construction contains several narrow limitations which are not found in the ordinary meaning of the term "integrally attached." In fact, the PTAB has not cited any source for these limitations, seemingly conjuring them from thin air.

Cuozzo's construction, "joined or combined to work as a complete unit," is consistent with the plain and ordinary meaning of the terms, because it includes the definitions of "attached" and "integrally." The word "attached" is generally defined to mean "connect[ed] or join[ed]; to connect as an adjunct or associated part." A321. The word "integrally" is generally defined to mean "essential to completeness; constituent; formed as a unit with another part." A321.

The PTAB's construction conflicts with the plain and ordinary meaning of the term, for three reasons:

First, the PTAB's construction requires "discrete parts" that are "physically" joined "without each part losing its own separate identity." A9. There is no support for any of these limitations from the definitions of "integrally" or "attached," and the PTAB has not cited any evidence (dictionaries, testimony, etc.) which support inclusion of these limitations. Further, the PTAB has not provided any explanation as to what the "identity" of a part means. In every mechanical and

electrical situation in which two discrete parts (e.g., a screw and a nut) are attached, the parts remain unchanged (e.g., neither the nut nor the screw spontaneously changed into a nail when they were attached). But, the PTAB does not explain how its construction would be applicable to a part (the colored display) that is a component of another device (speedometer) or provide any explanation of its concept of identity other than the circular "speedometer is a speedometer." A12.

Second, the PTAB's construction does not give any substantive meaning to the term "integrally." The word "attached" without the "integrally" modifier is used in other claims of the '074 Patent, and it appears that the PTAB's construction would similarly apply to the meaning of "attached" alone. For example, claim 15 recites, *inter alia*, "a needle" and "an axle having opposing ends with one end *attached* to said needle." A58 (7:24-31). In this claim, the PTAB's construction of "integrally attached" would apply to the use of "attached" – i.e., there are "discrete parts" (the axle and the needle) that are "physically joined together as a unit" (one end of the axle is physically joined with the needle) and "without each part losing its own separate identity" (the needle is still the needle and the axle is still the axle). Under claim construction law, each term in a claim must be given meaning. *Innova/Pure Water, Inc. v. Safari Water Filtration Sys*., 381 F.3d 1111, 1119 (Fed. Cir. 2004). The PTAB's construction does not give any meaning to "integrally."

Third, the PTAB mischaracterizes the unrebutted testimony of Cuozzo's expert, Prof. Morris, as to the meaning of "integrally attached" to one of skill in the art at the time of the invention. Under the BRI standard, a claim interpretation "must be consistent with the one that those skilled in the art would reach." *In re Cortright*, 165 F.3d 1353, 1359 (Fed. Cir. 1999). Under *Phillips*, expert testimony "can help the court determine what a person of ordinary skill in the art would understand claim terms to mean." *Phillips*, 415 F.3d at 319.

The PTAB held that "Prof. Morris's testimony refers broadly to an electronic embodiment, not specifically to a an electronic embodiment that makes uses of a common liquid crystal display for showing speed readings and delineations of which speed readings are in violation of the speed limit." A14. To the contrary, Prof. Morris's entire declaration was directed to whether one of skill in the art at the time of the invention would have understood "integrally attached" to encompass the single LCD embodiment. A305. In fact, Prof. Morris provided specific testimony and reasoning (referencing the specification, claims and design considerations), as to why one of skill in the art at the time of the invention would have understood "integrally attached" to encompass the single LCD embodiment:

> 22. It is my opinion, therefore, that confirmed claims 12 and 18 provide a reasonable basis for finding an embodiment of the invention where the speedometer and the colored display of claim 10 are integrally attached so that the speedometer includes the LCD and the LCD is the colored display. In other words, the speedometer has a colored display that is an LCD.

> 23. It is my opinion that because confirmed claims 12 and 18 support an embodiment of claim 10 where the speedometer has a colored display that is an LCD, one skilled in the art at the time of the invention would have reasonably thought that that embodiment included displaying both the speed and the speed limit on that display. In other words, one skilled in the art at the time of the invention would find it reasonable to display the speed on the LCD in addition to the speed limit in order to provide a speedometer that is less expensive and easier to produce.

A310-311. This testimony alone refutes the PTAB's position that Prof. Morris's testimony only vaguely addressed the single LCD embodiment.

In rejecting Prof. Morris's testimony as "vague," the PTAB relies on two cases which are irrelevant to the interpretation of "integrally attached" by one of skill in the art. First, the PTAB cites *KSR Int'l Co. v. Teleflex Inc*., 550 U.S. 398 (2007) for the proposition that a person of ordinary skill in the art possesses ordinary creativity and is not an automaton. A14. *KSR* makes this point not as to claim interpretation, but in explaining that one of ordinary skill in the art would not look solely to prior art that addresses the same problem as the invention when determining whether an invention was obvious. *KSR*, 550 U.S. at 420-21. Thus, *KSR* does not provide any support for the PTAB's rejection of Prof. Morris's testimony, which is directed to claim interpretation, not unobviousness.

Second, the PTAB cites *Lockwood v. Am. Airlines, Inc*., 107 F.3d 1565 (Fed. Cir. 1997) which considered whether a patent was entitled to an earlier priority date through a chain of applications. A14. The Court found that the chain was broken,

because at least one application in the chain failed to describe a claimed feature in the patent, and expert testimony could not substitute for such an omission. *Lockwood*, 107 F.3d at 1572 ("It is not sufficient for purposes of the written description requirement of § 112 that the disclosure, when combined with the knowledge in the art, would lead one to speculate as to modifications that the inventor might have envisioned, but failed to disclose. Each application in the chain must describe the claimed features."). Sufficiency of disclosure in a chain of applications is not at issue, and Prof. Morris's testimony did not substitute for omission of support for a claimed feature.

Accordingly, the Court should not let the PTAB's narrow and unsupported construction stand.

E. The PTAB Erred In Cancelling Claim 10 Under 35 § U.S.C. 103

i. Aumayer, Evans and Wendt do not disclose the claimed "display controller" and cannot be combined

U.S. Patent No. 6,633,811, filed Oct. 19, 2000, to Aumayer ("Aumayer") discusses "a method of automatically adjusting vehicle speed values displayed in a vehicle according to vehicle location, i.e., according to particular governmental region or country through which the vehicle is currently traveling." A214 (1:55-59. Aumayer's method is intended to solve the problem of driving between different regions or countries with different speed limits and different speed measurement units:

> Furthermore it is [well known] to provide special markings on the vehicle speed scale at certain special vehicle speed values, such as a maximum speed of 30 km/hr in residential areas or of 130 km/hr as posed or recommended speed on the autobahn in Germany or an expressway. If the user of the vehicle now drives the vehicle into a different country, generally different values are used for the speed limits for the various classes of roads and streets in the different country. Furthermore even the physical units of speed limits, which are posted on signs, may be different.

A214 (1:23-32).

Aumayer proposes to solve this problem by "(a) determining a current actual position of the vehicle with a positioning device, (b) locating the current actual position of the vehicle determined in step a) on a digital map, (c) identifying a region, such as state, country or city area, in which the current actual position is located on the digital map; and (d) displaying automatically on a display device at least one of an actual current speed of the vehicle and allowed speed limits in the region for at least one type of road or street in physical units used in the region identified in step c). A214 (1:64-2:8).

Aumayer discusses a "locating step" in which "[t]he region or area in which the vehicle is located is determined." A215 (3:60-62); A210 (Fig. 1a). Aumayer defines "region or area" as "a state, a country or a city or metropolitan region, in which respective predetermined speed limits exist for corresponding road or street types." A215 (3:62-65). The locating step is performed by a GPS locating device which determines the geographic position of the vehicle and then locates the

vehicle on a digital map or chart "that includes region boundaries." A215 (4:41-48); A210 (Fig. 1b). A "region-determining step" is then executed to determine the region of the vehicle from the position on the digital map. A215 (4:48-51).

After the "locating step" is complete, a "display adjustment step" is performed to update information shown on a speed display device 101 based on the current region of the vehicle. "Data regarding the vehicle, such as weight, engine size or whether or not a trailer is attached" are used to identify "the speed limits for different classes of roads or streets in the region in which the vehicle is located." A215 (4:56-60); A210 (Fig. 1c). The physical units for the region (e.g., mph or kmh) are also identified. If an adjustment to the speed display device 101 is necessary (i.e., if the vehicle has changed regions), the physical units of speed are changed, and "at least one maximum speed is displayed in the display device, which is the speed limit for a particular type of street or road, so that e.g. the maximum permitted speed is 50 km/hr in places in Germany." A215 (4:66-5:6).

Aumayer's method is implemented on a freely programmable combined instrument that "comprises a display screen so that the method according to the invention can be performed without mechanical or structural arrangement, for example not a speedometer with a pointer, with which speed values are indicated." A214 (2:48-53); A213.

FIG. 2d

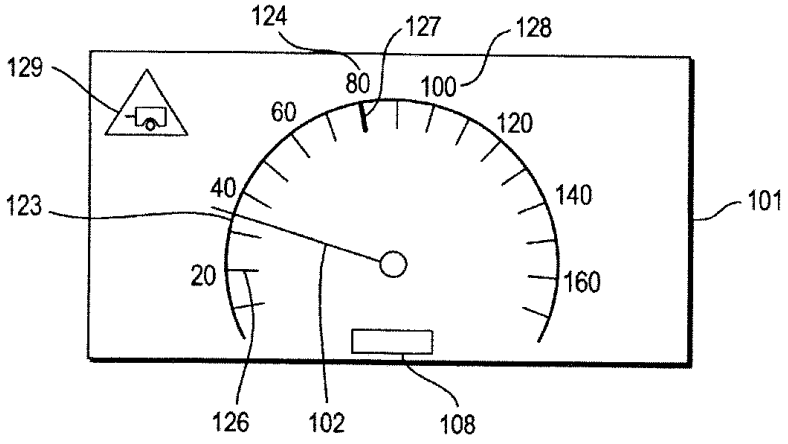


Figure 2d (reproduced above) of Aumayer depicts a display device 101 for display of speed information in a vehicle. A215 (3:49-51); A212 (Fig. 2d). The display device 101 depicts a scale 124 and a pointer 102 can move over the entire scale 124 to depict vehicle speed. A216 (5:32-34; 6:21-22). A scale mark 127 can be highlighted or emphasized to identify the speed limit. A216 (6:33-35).

U.S. Patent No. 3,980,041, filed Oct. 22, 1974, to Evans ("Evans") discusses a thin, plastic plate 12 with a layer 16 of contact adhesive for affixing to a front cover of a speedometer display. A257 (2:54-59); A258 (3:13-15). The plate 12 includes warning indicia, such as a special color, and is transparent so as not to obscure a speedometer needle 28 and dial 30 in the speedometer display. A257 (2:1-9). As shown in Figure 3 (reproduced below) of Evans, the plastic plate 12 is sized such that when it is affixed to the front cover of the speedometer display, it only covers numbers representing speeds in excess of the speed limit. A256 (Fig. 3). To indicate a different speed limit, the plate 12 can be replaced with a

differently configured plate, or the plate 12 can be recut and repositioned. A258 (3:37-42).

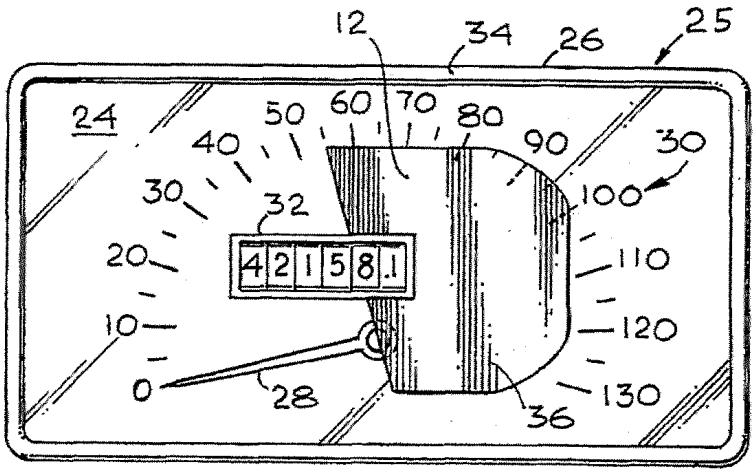
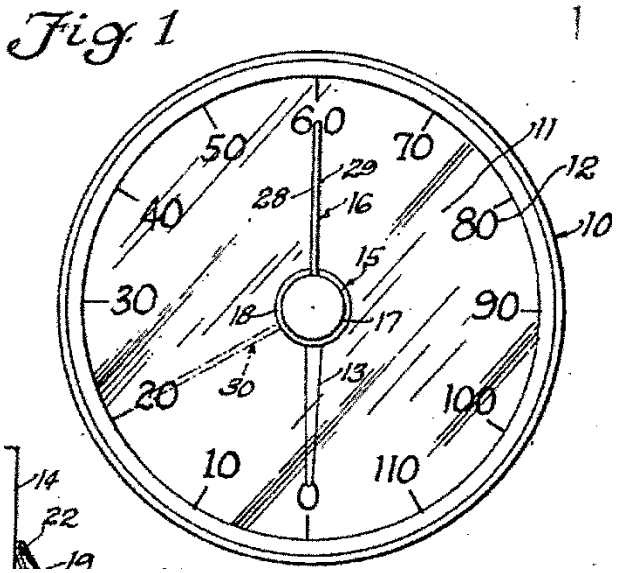
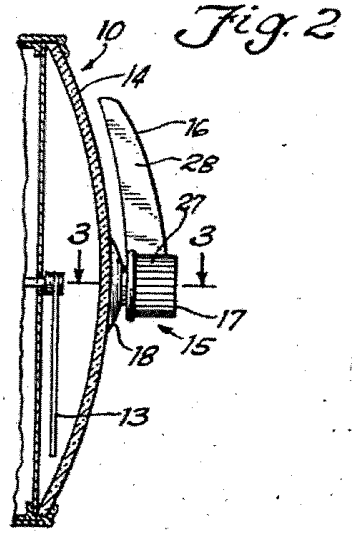


Fig. 3

U.S. Patent No. 2,711,153, filed Sept. 11, 1951, to Wendt ("Wendt") discusses a maximum speed indicator 15 consisting of a movable pointer 16 provided with a knob or handle 17 that is rotatably supported on a rubber suction cup unit 18. A271 (2:32-36). As shown in Figures 1 and 2 (reproduced below) of Wendt, the rubber suction cup unit 18 adheres to a glass cover 14 of a speedometer display. A269 (Figs. 1 and 2); A271 (2:37-41). When the driver "observes that the speed limit is 20 miles, by observing the traffic signs, he turns the pointer 16 to the speedometer indication 20…and thereafter the driver has only to make sure that the pointer 13 does not pass the position [20]." A272 (3:17-22).





The PTAB has incorrectly asserted that the combination of Aumayer, Evans and Wendt discloses all of the limitations of claim 10, and there existed motivation to combine these references which span nearly 50 years.

ii. Aumayer, Evans and Wendt do not disclose a display controller that shows speed readings in violation of "the speed limit at a vehicle's present location"

Aumayer repeatedly states that the vehicle's location is used in the "locating step" to identify the current *region* of the vehicle, and it is the speed limits associated with the region (not the geographic position determined by the GPS locating device) which are displayed on the speed display device 101. A215 (3: 60-65); A210 (Fig. 1a). One of ordinary skill in the art would not consider a region (i.e., "a state, a country or a city", as defined by Aumayer) as a "vehicle's present location," as recited in claim 10. For example, one of ordinary skill in the art would not equate "United States" with a "vehicle's present location"

considering that that there is no speed limit which corresponds to the "United States."

The PTAB's characterization of Aumayer supports Cuozzo's position. The PTAB states, "Aumayer also discloses that as a vehicle travels from one class of street or road to another, the speed limit display will be changed to reflect any change in the applicable speed limit." A34. If the only event that will trigger a change in the scale mark 127 is a change of road class or region, then Aumayer does not base the location of the scale mark 127 on the vehicle's present location. Said another way, in Aumayer, as the vehicle travels (and thus changes location) but stays on the same street or the same class of street, Aumayer will not adjust the scale mark 127.

The PTAB also asserts, "Cuozzo has articulated no purpose, let alone any benefit noted in the disclosure of Aumayer, for displaying to the driver of a vehicle the speed limit of any class of road in any region, when the vehicle is not presently on that class of road in that region." A34. The PTAB misses the point. The vehicle's travel on a particular class of road within a region is a broader concept than the vehicle's present location. Assuming the vehicle is traveling along a road in a region, the class of road will not change (and Aumayer will not change the scale mark 127), but the vehicle's location is continuously changing.

Neither Evans nor Wendt cure the above-described deficiencies of Aumayer. Neither Evans nor Wendt disclose or suggest the use of "a display controller" (Evans is an immovable, plastic plate and Wendt utilizes a knob, and neither even suggests automation) or "a global positioning system receiver."

Therefore, neither Aumayer nor Evans nor Wendt, either alone or in combination, discloses or suggests a "display controller [that] adjusts a colored display in response to signals from said global positioning system receiver to continuously update the delineation of which speed readings are in violation of *the speed limit at a vehicle's present location*," as recited in claim 10.

iii. There is no motivation to combine Aumayer, Evans and Wendt

Aumayer is specifically directed to "a method of automatically adjusting vehicle speed values displayed in a vehicle according to vehicle location, i.e., according to particular governmental region or country through which the vehicle is currently traveling." A214 (1:55-59). To implement this method, Aumayer requires a "freely programmable combined instrument" with "a display screen so that the method according to the invention can be performed without mechanical or structural arrangements, for example not a speedometer with a pointer, with which speed values are indicated." A214 (2:49-53). A main processor 203 "determines the data, which are relevant for the speed display device, by means of vehicle sensors," "determines which physical units are used for the vehicle speed values,"

and "determines the speed limits for the individual classes of streets and roads in the region in which the vehicle is located." A218 (7:12-25). The main processor 203 inputs all of this data to a display processor which controls a display device 211 to show "a changed speed scale, changes scale values, changed physical units as well as additional warning symbols and/or speed limit symbols." A218 (7:27-34).

On the other hand, Evans and Wendt are directed to completely manual devices which are fixed to conventional, mechanical speedometer displays. Evans discusses a plate 12 having a fixed size and shape that is adhered (e.g., via glue or rubber cement) to the cover of a speedometer display. A257 (2:63-3:3). Wendt discusses a manually rotatable pointer 16 on a rubber suction cup unit 18 that is affixed a glass cover 14 of a speedometer 10. A271 (2:26-36).

One of ordinary skill in the art would not combine the dynamic, continuously controlled display device 211 of Aumayer with the immovable plate 12 of Evans or the manually rotated pointer 16 and rubber suction cup unit 18 of Wendt. In fact, in the institution order, the PTAB specifically stated that Garmin "has not explained why one with ordinary skill in the art would have chosen to use the fixed immovable colored plate 12 of Evans in combination with the dynamic display system of Aumayer which provides the benefit of a continuously controlled and updated colored display…" A291-292.

In its Final Decision, the PTAB concludes that one of ordinary skill in the art would be motivated to make the plate 12 in Evans dynamically adjustable by the driver, solely for the reason that the plate 12 in Evans could be replaced with a different plate and Wendt discusses use of a rotatable pointer to indicate the speed limit. A33. However, the PTAB does not provide any explanation as to how Evans' plate 12, which is affixed with glue or rubber cement to the speedometer cover 24, could possibly be made movable in view of Wendt's rotating pointer 16, or what reason one of skill in the art would have to make Evans' plate 12 movable. For example, the plate 12 is a static size and shape. If it rotates, it will no longer be oriented to align with the speedometer dial, rendering it useless and likely presenting a confusing display to the driver. Hence, Evans discusses replacing or cutting the plate 12 for a different size and shape. A258 (3:37-42). Thus, one of skill in the art would not be motivated to combine Evans and Wendt.

In the same conclusory fashion, the PTAB further asserts that "the manually-adjustable colored plate suggested by Evans and Wendt can be improved by adding automatic control if the dynamic settings are automatically determinable, as in the case of Aumayer's device. A33. This amounts to nothing more than a conclusory statement to make something manual into something automatic. However, the PTAB has not provided a single reason why or how such a combination would work. For example, the PTAB has not indicated how "automatic control" could be

added to the manual devices of Evans and Wendt, or what "dynamics settings [that] are automatically determinable" refers to. What are the "dynamic settings" of Aumayer that could be applied to Evans and Wendt, and how would such settings be "automatically determinable" by Evans and Wendt? The PTAB erroneously asserts that "Cuozzo does not argue that one with ordinary skill in the art would not have known how to implement the automatic control on the manually-adjustable colored plate of Evans and Wendt." A33. However, Cuozzo raised this exact concern in the patent owner response – "it is respectfully submitted that one of ordinary skill in the art would not be motivated to combine Aumayer with Evans or Wendt, because…the fully manually and mechanical devices of Evans and Wendt are incompatible with the automatic and continuously controlled electronic display of Aumayer." A344.

F. Tegethoff, Awada, Evans And Wendt Do Not Disclose The Claimed "Display Controller" And Cannot Be Combined

German patent application publication No. DE 197 55 470, filed December 3, 1997, to Tegethoff ("Tegethoff") discusses a display system 1 with a screen 37 and an image generating computer 33 which is connected to information-providing elements 31 and on-board computer 32. A238 (2:21-25).[2] The information providing elements 31 include elements for measuring speed, rpms, fuel

[2] As to Tegethoff, reference is made to the English translation. For cites, the column number is either "1" (left column) or "2" (right column).

consumption, fuel tank contents, engine power and temperature, distance, mileage, as well as elements for receiving transmission regarding traffic control, databases with traffic control information and for giving maximum power depending on the rotational speed and the load situation of the engine, and sensors for determining external influences on the vehicle. A239 (5, 2:13-30).

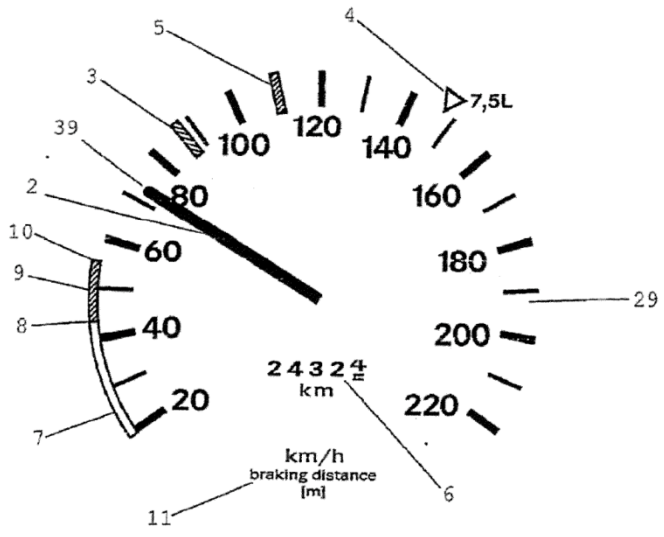


Fig. 2

Figure 2 (reproduced above) of Tegethoff shows a display including a digital representation of a pointer 2 for speed measurement on a scale 29. A251; A238 (2:32-37). A mark 5 "shows a permissible maximum speed for the road section where the car is currently located." A240 (1:9-12). The "maximum permissible speed" can be set in one of three ways: (1) manually by the driver, (2) "according to an element for navigation and a database with traffic control information," or (3) "by an element for receiving transmitters outside the vehicle for traffic control."

A240 (1:13-18). The mark 5 can vary in color or thickness to stand out on the scale 29. A241 (2:16-19).

U.S. Patent No. 6,515,596, filed March 8, 2001, to Awada ("Awada") discusses a numerical display 110 on a dashboard 107 of a vehicle showing the posted speed limit. A265 (2:25-31). As shown in Figure 1 (reproduced below) of Awada, a warning light 120 indicates when the vehicle's speed exceeds the posted speed limit. A261 (Fig. 1); A265 (2:31-32). Speed limit information is obtained using, for example GPS location determination equipment. A265 (2:35-37).

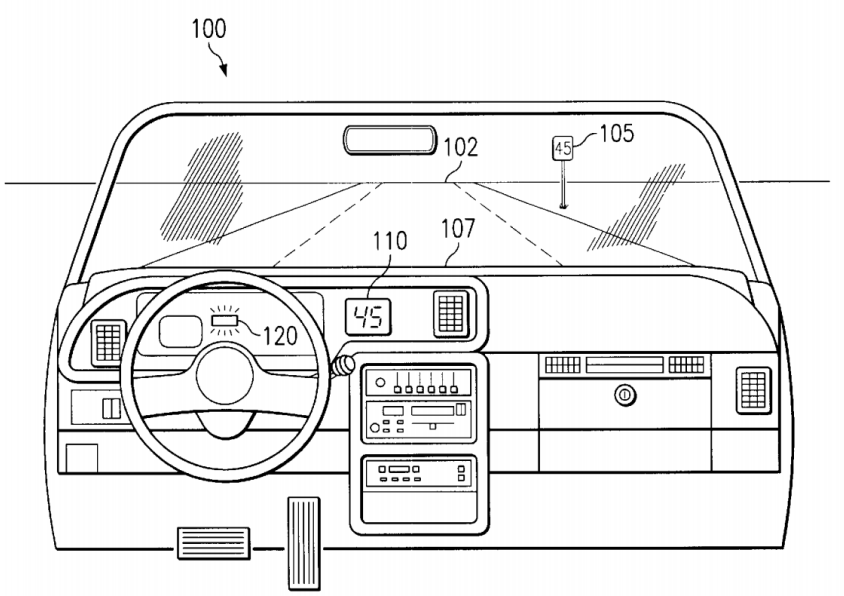


FIG. 1

Figure 2D (reproduced below) of Awada is a block diagram 251 of Awada's system. A263 (Fig. 2D). "Information about the vehicle's current speed may be obtained through a speedometer interface 264 and reported to the CPU 254," and "the proper speed limit, and possibly a warning signal to indicate an exceeded

speed limit are displayed through a display unit 266 based on instructions from the CPU." A266 (4:33-39).

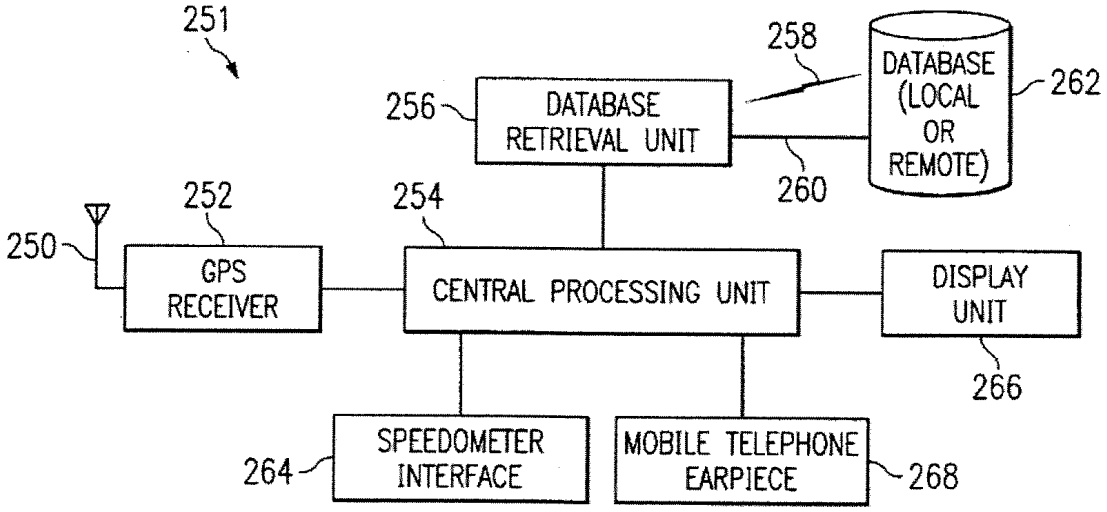


FIG. 2D

i. Tegethoff, Awada, Evans And Wendt do not disclose a display controller that shows speed readings in violation of "the speed limit at a vehicle's present location"

The "maximum permissible speed" in Tegethoff indicated by the mark 5 is not the "speed limit at a vehicle's present location." Tegethoff states that the "maximum permissible speed" can be set in one of three ways: (1) manually by the driver, (2) "according to an element for navigation and a database with traffic control information," or (3) "by an element for receiving transmitters outside the vehicle for traffic control." A240 (1:13-18). In each of these ways, there is no disclosure or suggestion that the "maximum permissible speed" is the legal "speed limit" or determined based on a vehicle's present location." For example, a driver could manually set the "maximum permissible speed" at 45 mph even though the

legal speed limit is 65 mph, simply because the driver feels more comfortable if he does not drive faster than 45 mph. Further, if the "maximum permissible speed" is set based on "an element for navigation and a database with traffic control information," the "maximum permissible speed" could be marked as 45 mph even though the legal speed limit is 65 mph, because there is traffic. And still further, if the "maximum permissible speed" is set based on "an element for receiving transmitters outside the vehicle for traffic control," the "maximum permissible speed" could be marked as 45 mph even though the legal speed limit is 65 mph, because the vehicle receives signals from traffic control transmitters. In none of these instances is the "maximum permissible speed" discussed in Tegethoff the "speed limit at a vehicle's present location."

The PTAB agreed that the "speed limit" recited in claim 10 is the legal speed limit at the vehicle's present location. However, the PTAB asserts that Tegethoff discloses, or at the very least would have suggested, the legislative speed limit as one form of implementation of what is referred to as "'maximum possible speed." A41. The PTAB's sole basis for this conclusion is Tegethoff's statement:

> "w[i]th the markings shown above in the shape of marks or display bars, the coloring can also help quicker classification of information by the driver. Thus, for example, warnings that require immediate action or represent a critical technical or legislative limit, can appear in the color red (e.g., a maximum speed or the part of the breaking

> distance or stopping distance that exceeds the distance to the vehicle ahead."

A241 (1:38-48).

The PTAB's conclusion is incorrect for two reasons. First, the mark 5 identifying the "maximum permissible speed" is not a "warning," because it can be set manually and based on traffic information, and therefore may have no relationship to the legal speed limit at the vehicle's present location. Second, Tegethoff expressly states that the "maximum permissible speed" is determined in one of three ways – manually, navigation element and traffic database, or receiving information for traffic control. A240 (1:13-18). The reference to "maximum speed" and "legislative limit" does not expand the express means by which maximum permissible speed is determined.

Awada does not cure the above-described deficiencies of Tegethoff. There is no discussion or suggestion in Awada of any device that displays "speed readings" of the vehicle. If, for example, the vehicle in Awada is on a highway with a speed limit of 65 mph, the numerical display 110 will statically display the number "65". Neither the numerical display 110 nor the warning light 120 display "speed readings" of the vehicle. In fact, Awada does not mention a speed dial or speedometer or any other device which includes a component for displaying "speed readings," except for the vague reference to "a speedometer interface 264" which is optional and is solely meant to report information about the vehicle's

current speed to a CPU 254 that operates the warning light 120. A266 (4:33-35). Therefore, Awada neither discloses nor suggests a "display controller…[that] continuously update[s] the delineation of which speed readings are in violation of the speed limit at a vehicle's present location."

Neither Evans nor Wendt cure the above-described deficiencies of Tegethoff and Awada. As explained above, neither Evans nor Wendt disclose or suggest the use of "a display controller" or "a global positioning system receiver."

Therefore, neither Tegethoff nor Awada nor Evans nor Wendt, either alone or in combination, discloses or suggests a "display controller [that] adjusts a colored display in response to signals from said global positioning system receiver to continuously update the delineation of which speed readings are in violation of the speed limit at a vehicle's present location," as recited in claim 10.

ii. There is no motivation to combine Tegethoff, Awada, Evans and Wendt

One of ordinary skill in the art would not be motivated to combine Tegethoff with Awada, because the references teach away from their combination. As noted above, Tegethoff discusses a fully electronic display system which displays a mark 5 indicating a "maximum permissible speed" on a scale 29 for speed measurement. The "maximum permissible speed" is set manually or based on traffic information and does not correspond to the legal speed limit, which is the sole function of the numerical display 110 in Awada.

Tegethoff allows for manually setting the maximum permissible speed or automatic setting based on traffic information. A240 (1:13-18). The PTAB states that Tegethoff includes an implementation which sets the maximum permissible speed based on "a navigation device and a database." A44. This is demonstrably false. Tegethoff does not rely on a general database; it is "a database with traffic control information." A240 (1:14-17). One of ordinary skill in the art would not use the Tegethoff device, which allows the driver to set the mark 5 above a posted speed limit, with the numerical display 110 of Awada, because the entire purpose (warning a driver when he is going faster than the posted speed limit) would be frustrated. Similarly, one of ordinary skill in the art would not use the Tegethoff device, which automatically sets the mark 5 below a posted speed limit in high traffic situations, with the numerical display 110 of Awada which is meant to inform the driver of the speed limit, not the safest speed to travel based on traffic conditions.

G. The PTAB Denied Cuozzo's Motion To Amend Solely Based On Its Erroneous Claim Construction

If the Court adopts Cuozzo's construction of "integrally attached" or otherwise interprets "integrally attached" to encompass the single LCD embodiment, a remand to the PTAB is appropriate for reconsideration of Cuozzo's motion to amend the claims.

Cuozzo filed a motion to replace claims 10, 14 and 17 with proposed substitute claims 21-23. A47. Proposed substitute claim 21 was a verbatim copy of claim 10, with two additional limitations, "wherein the speedometer comprises a liquid crystal display, and wherein the colored display is the liquid crystal display." JA47; A357-358. The first additional imitation, "wherein the speedometer comprises a liquid crystal display," was copied verbatim from claim 18, which depended directly from claim 10. A58 (8:11-12). The second additional limitation, "wherein the colored display is the liquid crystal display," was copied from claim 12, which depended directly from claim 10. A58 (7:16-17).

The PTAB denied Cuozzo's motion based solely on its erroneous interpretation of "integrally attached" as excluding the single LCD embodiment. A47-48. The PTAB held that claims 21-23 failed to provide written description support under 35 U.S.C. § 112, first paragraph. A48.

The PTAB further held that claims 21-23 "enlarge the scope of the original patent claims which they replace." A48. As the PTAB admits, claim 10 covered mechanical and electronic embodiments of the invention. A14. Proposed substitute claim 21 is limited to the single LCD embodiment. Accordingly, it was error to hold that claim 21 enlarged the scope of claim 10 when at least the mechanical embodiment was no longer encompassed by claim 21.

VI. CONCLUSION

For the foregoing reasons, the Court should reverse the PTAB's final written decision cancelling claims 10, 14 and 17. Alternatively, the Court should reverse and remand for reconsideration of Cuozzo's motion to amend the claims based on the correct interpretation of "integrally attached."

Respectfully submitted,

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ADDENDUM TABLE OF CONTENTS

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Trials@uspto.gov
571-272-7822

Paper 59
Date: 13 November 2013

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

GARMIN INTERNATIONAL, INC. and
GARMIN USA, INC.
Petitioner

v.

CUOZZO SPEED TECHNOLOGIES LLC
Patent Owner

Case IPR2012-00001
Patent 6,778,074

Before JAMESON LEE, MICHAEL P. TIERNEY, and JOSIAH C. COCKS, *Administrative Patent Judges.*

LEE, *Administrative Patent Judge.*

FINAL WRITTEN DECISION
35 U.S.C. § 318(a) and 37 C.F.R. § 42.73

BACKGROUND

A. Introduction

Petitioner, Garmin International Inc. and Garmin USA, Inc. ("Garmin"), filed a petition on September 16, 2012, for *inter partes* review of claims 1-20 of Patent 6,778,074 ("the '074 Patent") pursuant to 35 U.S.C. §§ 311 et seq. On January 9, 2013, the Board denied the petition as to claims 1-9, 11-13, 15, 16, and 18-20, and instituted trial for claims 10, 14, and 17, on two grounds of unpatentability. Paper 15.

After institution of trial, Cuozzo Speed Technologies LLC, ("Cuozzo") filed a Patent Owner Response ("PO Resp."). Paper 31. Cuozzo also filed a Motion to Amend Claims by substituting proposed new claims 21-23 for claims 10, 14, and 17. Paper 32. Garmin filed a Reply (Paper 40) to the Patent Owner Response, and also its Opposition (Paper 39) to Cuozzo's Motion to Amend Claims. Cuozzo then filed a Reply (Paper 44) to Garmin's Opposition to Cuozzo's Motion to Amend Claims.

Oral hearing was held on August 16, 2013.[1]

The Board has jurisdiction under 35 U.S.C. § 6(c). This final written decision is issued pursuant to 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73.

Garmin has shown that claims 10, 14, and 17 are unpatentable.

Cuozzo's Motion to Amend Claims is *denied*.

B. The Invention of the '074 Patent[2]

The disclosed invention of the '074 Patent relates to a speed limit indicator and method for displaying speed and the relevant speed limit for use in connection

[1] A transcript of the oral hearing is included in the record as Exhibit 3005.

[2] The Board has added a copy of the '074 patent as Exhibit 3006.

with vehicles. Ex. 3006, 1:9-11. Specifically, the speed limit indicator and the method for displaying speed and the relevant speed limit have particular utility in connection with displaying the current speed of a vehicle and how it relates to the legal speed limit at the current location of a vehicle. Ex. 3006, 1:11-16. The invention eliminates the need for the driver to take his or her eyes off the road to look for speed limit signs, and resolves any confusion that might exist as to what is the current legal speed limit. Ex. 3006, 1:22-25. The specification states that by allowing the driver to keep his or her eyes on the road more, the speed limit indicator reduces the chance of an accident. Ex. 3006, 1:27-29.

Only one embodiment is described in the specification of the '074 Patent with a meaningful degree of specificity. It is a mechanical embodiment that does not make use of a liquid crystal display for displaying speed or how the current speed relates to the speed limit for the current location of the vehicle.

Figure 1 is reproduced below:

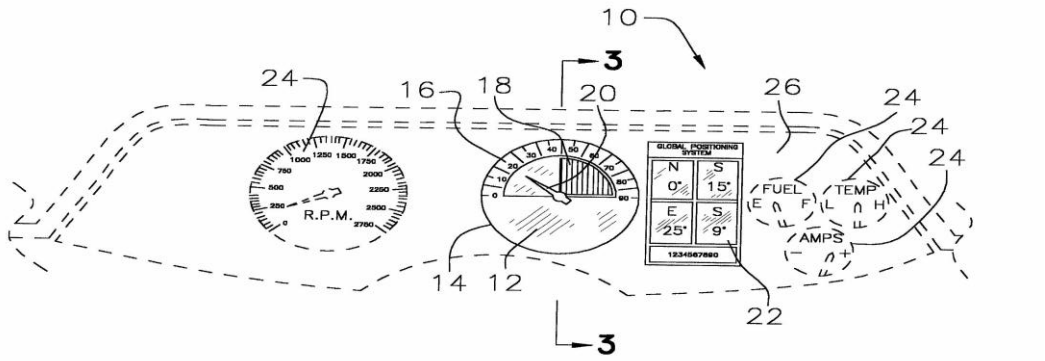


FIG. 1

Figure 1 illustrates a specifically disclosed embodiment. In that embodiment, speedometer 12 is mounted on dashboard 26. Ex. 3006, 5:8-9. It has a backplate 14 made of plastic, speed denoting markings 16 painted on backplate

14, a colored display 18 made of a red plastic filter, and a plastic needle 20 rotatably mounted in the center of backplate 14. Ex. 3006, 5:8-11. A global positioning system receiver 22 is positioned adjacent to speedometer 12, and other gauges typically present on a vehicle dashboard 26 are also provided. Ex. 3006, 5:13-15.

Figure 2 is reproduced below:

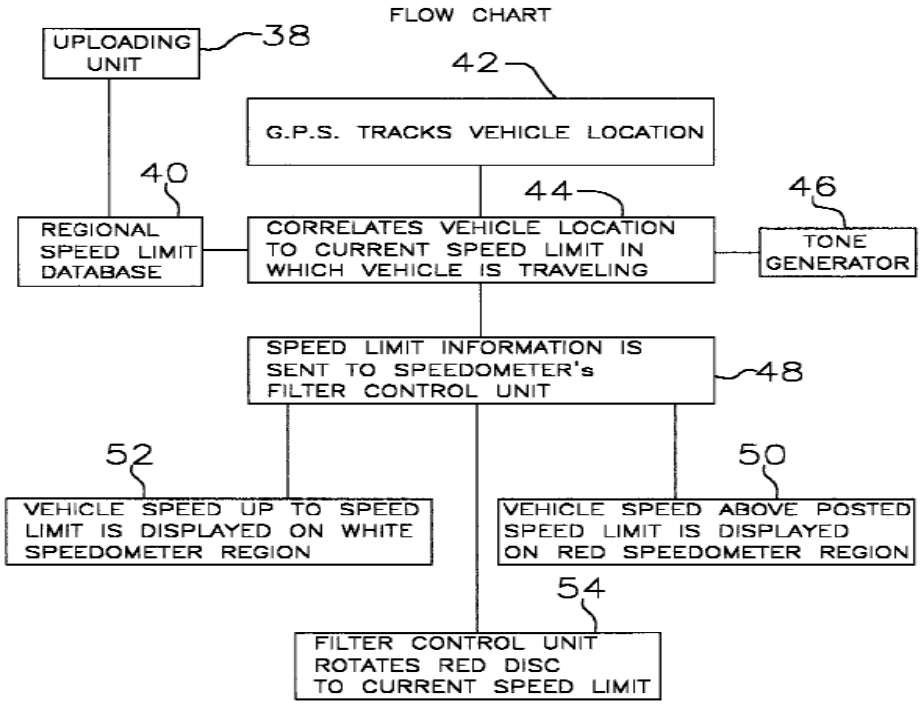


FIG. 2

Figure 2 illustrates in block diagram form the steps carried out by a speed limit indicator shown in Figure 1. Referring to the flowchart of Figure 2, the specification of the '074 Patent describes operation of the speed limit indicator as follows (Ex. 3006, 5:25-39, emphasis added):

> Uploading unit **38** uploads current data to a regional speed limit database **40**. The global positioning system receiver **42** tracks the vehicle's location and speed, and identifies the relevant speed limit

> from the database for that location. The global positioning system receiver compares the vehicle's speed and the relevant speed limit **44**, and uses a tone generator **46** to generate a tone in the event that the vehicle's speed exceeds the relevant speed limit. The speed limit information is sent from the global positioning system receiver to a filter control unit **48**. **The control unit adjusts the colored filter so that the speeds above the legal speed limit are displayed in red 50 while the legal speeds are displayed in white 52. This is accomplished by the control unit rotating the red filter disc 54 to the appropriate degree**.

Thus, in the step shown in block 54, a filter control unit rotates a red filter disc, which is element 18 in Figure 1, to cover portions of the speed display on speedometer 12, such that readings covered or overlapped by the red filter disc reflect speeds above the speed limit for the current location of the vehicle.

In column 6 of the '074 Patent, lines 31-34, there is brief mention of a different embodiment. It also is stated generally (Ex. 3006, 6:11-14):

> And although a red filter disc has been described, it should be appreciated that the colored display herein described could also take the form of a liquid crystal display.

In that regard, claim 12, which depends on claim 10, also recites that "said colored display is a liquid crystal display." Ex. 3006, 7:15-16. The above-quoted text does not describe any specific implementation and indicates only generally that a liquid crystal display may be used in place of the red filter disc. That does not describe an embodiment in which the speed readings themselves "and" the delineation of which speeds are above the speed limit at the current location are both shown on the same liquid crystal display. As is noted by Garmin (Reply at 3, n.1), the liquid crystal display simply may provide colored lighting to a conventional mechanical speedometer needle and backplate.

Similarly, claim 18, which depends on claim 10, recites "wherein said speedometer comprises a liquid crystal display," but does not provide any manner of specific implementation. It only indicates, generally, that the speedometer may include a liquid crystal display. That does not describe an embodiment in which the speed readings themselves "and" the delineation of which readings are above the speed limit are both shown on the same liquid crystal display.

During oral argument, counsel for Cuozzo acknowledged that even if the features added by dependent claims 12 and 18 are considered together, the combination does not require use of one liquid crystal display to show both speed readings themselves and a delineation of whether the current speed exceeds an applicable speed limit for the current location of the vehicle. Ex. 3005, 78:6-9.

C. The Alleged Grounds of Unpatentability

The prior art references as applied to claims 10, 14, and 17 are:

Aumayer	U.S. 6,633,811	Oct. 14, 2003; filed Oct. 19, 2000	Ex. 1001
Awada	U.S. 6,515,596	Feb. 4, 2003; filed Mar. 8, 2001	Ex. 1010
Tegethoff	German DE 19755470 A1	Sept. 24, 1998	Ex. 1002
	English Translation		Ex. 1003
Evans	U.S. 3,980,041	Sept. 14, 1976	Ex. 1009
Wendt	U.S. 2,711,153	June 21, 1955	Ex. 1011

Citations to Tegethoff refer to its English translation, Ex. 1003.

The Board instituted trial on the following grounds of unpatentability:

Reference(s)	**Basis**	**Claims Challenged**
Aumayer, Evans, and Wendt	§ 103	10, 14, 17
Tegethoff, Awada, Evans, and Wendt	§ 103	10, 14, 17

DISCUSSION

An appropriate construction of the term "integrally attached" in independent claim 10 is central to the patentability analysis of claims 10, 14, and 17.

Claim 10 is reproduced below (emphasis added):

> 10. A speed limit indicator comprising:
>
> a global positioning system receiver;
>
> a display controller connected to said global positioning system receiver, wherein said display controller adjusts a colored display in response to signals from said global positioning system receiver to continuously update the delineation of which speed readings are in violation of the speed limit at a vehicle's present location; and
>
> **a speedometer integrally attached to said colored display**.

Claim 10 requires that a speedometer be "integrally attached" to a colored display, which is adjustable to update continuously the delineation of which speeds are in violation of the speed limit at the vehicle's present location. Claim 14 depends on claim 10, and claim 17 depends on claim 14.

A. Claim Construction

Principles of Law

In an *inter partes* review, claim terms in an unexpired patent are interpreted according to their broadest reasonable construction in light of the specification of the patent in which they appear. 37 C.F.R. § 42.100(b); *Office Patent Trial Practice Guide*, 77 Fed. Reg. 48756, 48766 (Aug. 14, 2012). Claim terms are also given their ordinary and customary meaning as would be understood by one of ordinary skill in the art in the context of the entire disclosure. *In re Translogic Tech., Inc*., 504 F.3d 1249, 1257 (Fed. Cir. 2007).

If an inventor acts as his or her own lexicographer, the definition must be set forth in the specification with reasonable clarity, deliberateness, and precision. *Renishaw PLC v. Marposs Societa' per Azioni*, 158 F.3d 1243, 1249 (Fed. Cir. 1998). Neither Petitioner nor Patent Owner contends that the specification of the '074 Patent, as filed, coined a new meaning for any term.

If a feature is not necessary to give meaning to what the inventor means by a claim term, it would be "extraneous" and should not be read into the claim. *Renishaw PLC*, 158 F.3d at 1249; *E.I. du Pont de Nemours & Co. v. Phillips Petroleum Co*., 849 F.2d 1430, 1433 (Fed. Cir. 1988). The construction that stays true to the claim language and most naturally aligns with the inventor's description is likely the correct interpretation. *See Renishaw PLC*, 158 F.3d at 1250.

Board's Construction of "integrally attached"

According to plain and common usage, the central characteristic of "integrally attached" stems from the word "attached." That is because the term "integrally" modifies "attached" by specifying a form of attachment. The general characteristic of two components being "attached" to each other cannot be eliminated whatever is the effect of adding "integrally" to modify "attached."

For a speedometer to be "integrally attached" to a colored display, there must be a speedometer and a colored display that are separately identifiable from each other, or else "attached" effectively would be read out of the claim. Adding the modifier "integrally" does not negate or nullify "attached." That does not mean the speedometer and the colored display may not share any part. But it does mean that the sharing may not be so substantial, e.g., the entirety of the colored display is subsumed within the speedometer, that the speedometer and the colored display lose their separate identities. It would be illogical to regard one unit as being "attached" to itself.

The Board construes "integrally attached" as applied to the colored display and the speedometer in the context of the disclosure of the '074 Patent as meaning:

> discrete parts physically joined together as a unit without each part losing its own separate identity.

In the joined unit, the colored display is still the colored display and the speedometer is still the speedometer; each retains its own separate identity. That is consistent with the specification. With reference to Figure 1, the specification of the '074 Patent discloses that colored display 18 in the form of a red plastic filter is a separate item from backplate 14, speed denoting marking 16 on backplate 14, and needle 20. Ex. 3006, 5:9-12. All of those other components, exclusive of the red plastic filter, form the speedometer, which is separate from the colored display.

Cuozzo's Construction of "integrally attached"

Cuozzo disagrees with the Board's construction, and argues that "integrally attached" should be construed to mean: joined or combined to work as a complete unit. PO Resp. 3. On the surface, it would appear that the difference between the Board's construction and Cuozzo's construction is that Cuozzo's construction is broader and encompasses the Board's construction, because Cuozzo's construction

does not require two separate parts to retain their separate identities. In actuality, however, Cuozzo's construction is not broader.

If Cuozzo's construction is broader and encompasses the Board's construction, then whatever prior art that applies under the Board's construction still applies under Cuozzo's construction and claims 10, 14, and 17 would be equally unpatentable. Responding to the Board's inquiry at oral argument, counsel for Cuozzo acknowledged that Cuozzo's construction is "not" just broader than the Board's construction. Ex. 3005, 62:6-22.

Cuozzo's construction is diametrically different from the Board's construction, because Cuozzo reads its construction as requiring an "integral display" in the sense that there are no longer separate identities between the speedometer and the colored display. Cuozzo's arguments are directed to an "integral display" rather than a speedometer that is "integrally attached" to a colored display as actually is recited in claim 10.

Cuozzo's construction reads out the "attached" portion of the "integrally attached" recitation in the claim. Cuozzo effectively converts the claim feature actually claimed to an "integral display" that shows both current speed readings and the delineation of which speed readings are in violation of the speed limit. During oral argument, counsel for Cuozzo indicated that under Cuozzo's construction, there has to be a display that both functionally and structurally integrates the speedometer and the colored display, such that there only is a single display. Ex. 3005, 36:3-37:18.

The Specification and Prosecution History

The term "integrally attached" does not appear in the specification and original claims of the application, which was filed on March 18, 2002, and later issued as the '074 Patent. The term was proposed during examination by

amendment to application claims 1 and 11 to distinguish over Awada.[3] Ex. 1013, 1-3. In the remarks submitted with that amendment, support for the feature that the speedometer is "integrally attached" to the colored display is said to exist in parts of the specification that are now column 5, lines 9-12, column 5, lines 45-49, and Figures 1, 3, and 4 of the '074 Patent. Ex. 1013, 7:23-25.

The above-quoted portions of the specification describe speedometer backplate 14, speed denoting markings 16 painted on backplate 14, and plastic needle 20, as separate and discrete elements from the colored display 18, which is a rotatable red plastic filter. The specification of the '074 Patent discloses that colored display 18, in the form of a red plastic filter, is a separate item from backplate 14, speed denoting marking 16 on backplate 14, and needle 20, which form a speedometer separate from the red plastic filter. Ex. 3006, 5:9-12.

Thus, Cuozzo relied on separate and discrete components, joined as one unit, as providing written description support for "integrally attached."

We are cognizant that the specification of the '074 Patent states: "Speedometer **12** has a backplate **14** made of plastic, speed denoting markings **16** painted on backplate **14**, a colored display **18** made of a red plastic filter, and a plastic needle **20** rotatably mounted in the center of backplate **14**." Ex. 3006, 5:9-12. That is an expression that speedometer 12 includes colored display 18, which appears to be contrary to the Board's construction of "integrally attached." But there is no such inconsistency, as is explained below.

With respect to the mechanical embodiment shown in Figure 1 and described in column 5, lines 9-12, and column 5, lines 45-49, even though there is language referring to speedometer 12 as including colored display 18, there is no language referring to speedometer 12 as being "integrally attached" to the colored

[3] Application claim 11 issued as patent claim 10.

display 18. Had there been such language, coexistent with language noting that the speedometer includes the colored display, we would accord it appropriate weight.

Speedometer 12 is a speedometer with or without red plastic filter 18. It is speedometer 12 without the red plastic filter 18 that is "integrally attached" to the colored display that is red plastic filter 18. Cuozzo does not contend, and reasonably cannot contend, that speedometer 12 is not a speedometer unless colored display 18 is a component of the speedometer. The construction that stays true to the claim language, e.g., "integrally attached," and most naturally aligns with the inventor's description is likely the correct interpretation. *See Renishaw PLC*, 158 F.3d at 1250. It is illogical to regard an apparatus as being attached to a component completely contained within itself.

When amending application claims to distinguish the claimed invention from Awada, the applicant stated, Ex. 1013, 7:25-8:2:

> The cited Awada (6,515,596) lacks a speedometer integrally attached to the speed limit display (column 2, lines 40-42 and Figs. 1 and 4-6). The vehicle's driver is forced to look in two separate locations and then mentally compare the speed limit with his vehicle's speed to determine how close he is to speeding if he is not already doing so sufficiently to activate the light and/or tone.

Figure 1 of Awada is reproduced below:

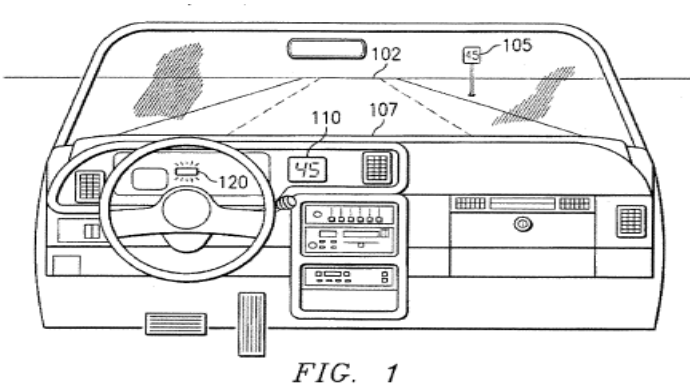


FIG. 1

Figure 1 illustrates a display 110, separate and remote from the speedometer, which shows the speed limit. Display 110 showing the speed limit is located at a substantial distance from the speedometer, which is located at a conventional location within the dashboard of the vehicle. "Integrally attached" would require the speedometer and the display 110 to be combined physically as one unit, without each losing its own separate identity, thus providing a distinction from Awada's arrangement. It is not necessary to read into the claims an "integral display" to provide such a distinction, and converting "integrally attached" to "integral display" would read out of the claims the plain and ordinary meaning of "attached."

Expert testimony

We also have considered Cuozzo's argument that the disclosure in the '074 Patent as filed would teach one with ordinary skill in the art to combine the speedometer readout with speed limit information on the colored display, resulting in an electronic embodiment making use of a common LCD (liquid crystal display) shared by the speedometer and the colored display. Cuozzo states:

> Prof. Morris explained how these disclosures, in his opinion, would teach one of skill in the art "to combine the speedometer readout with the speed limit information on the LCD." Morris Decl., Exhibit 2002 to Paper 21, at ¶¶ 27-29. The resulting electronic embodiment would have a common LCD component shared by the speedometer and colored display.

PO Resp. 5:12-17.

Cuozzo's argument and the supporting testimony of Prof. Morris are unpersuasive.

Prof. Morris states: "It is my opinion that it would be natural for one skilled in the art at the time of the invention to combine the speedometer readout with the

speed limit information on the LCD." Ex. 2002 ¶ 28. Prof. Morris further states: "It is my opinion that the mention of an LCD in confirmed claims 12 and 18 and col. 3, lines 4-6 and col. 6, lines 10-14 of the '074 [Patent] implies that there is an electronic embodiment to one skilled in the art at the time of the invention." Ex. 2002 ¶ 29.

The language of Prof. Morris's statements is vague. It is uncertain just how much is deemed to be described by the disclosure itself, and how much is filled-in or completed by one with ordinary skill in the art, who possesses ordinary creativity and is not an automaton. *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 421 (2007). What would have been obvious to one with ordinary skill in the art does not establish what actually is described in the specification. *Lockwood v. Am. Airlines, Inc.*, 107 F.3d 1565, 1572 (Fed. Cir. 1997). In any event, even assuming that such an embodiment is deemed to have been disclosed, the specification explains inadequately why such an embodiment would be covered by the claim language at issue, i.e., "integrally attached" as applied to the speedometer and a colored display.

Furthermore, it is undisputed that an electronic embodiment is disclosed in the specification, just not an electronic embodiment that makes use of the same liquid crystal display to show current speed readings of the speedometer and delineations of which speed readings are in violation of the speed limit at the present location of the vehicle. Prof. Morris's testimony refers broadly to an electronic embodiment, not specifically to an electronic embodiment that makes use of a common liquid crystal display for showing speed readings and delineations of which speed readings are in violation of the speed limit.

Even assuming that an electronic embodiment of the right type is deemed to have been disclosed, it is explained inadequately why such an embodiment would

be covered by the claim language at issue, i.e., "integrally attached" as applied to the speedometer and a colored display.

We find the following testimony of Prof. Morris, on cross-examination, meaningful and instructive (emphasis in original):

> Q **But the claims never specifically recite that the speedometer and the colored display are implemented on the same LCD; right?**
>
> MR. CONNOR: Objection to form.
>
> A I never saw that specific thing said, that they should be, said they should be integrated. The amendment said that they were integrally attached or the important feature was that they were integrated in the same place, but I never saw the specific words put all these on the same LCD display.

Ex. 1021, 11:41:2-12. Thus, even Cuozzo's own expert, Prof. Morris, recognizes a distinction between (1) a speedometer that is "integrally attached" to a colored display, and (2) an integrated or integral electronic display using a single liquid crystal display. The former is what is claimed, not the latter.

Consistent with the Board's claim construction, Prof. Morris states that it would be "uncommon" to refer to two things displayed on a common display as attached. Ex. 1021, 18:69:2-6. Prof. Morris additionally states that he would not use the term "attached" to refer to the relationship between two items that are graphically displayed on the same display. Ex. 1021, 18:70:23-18:71:2.

Prof. Morris further states: "It is further my opinion that the Amendment [Ex. 1013 discussed previously] provides a reasonable basis for finding that the inventor added the term 'integrally' to claim 10 to limit the attachment to an integrated display that displays the speed and speed limit in the same location." Ex. 2002 ¶ 32. The language used by Prof. Morris actually comports more with the Board's construction of "integrally attached," not Cuozzo's construction.

Prof. Morris refers to displaying speed and speed limit "in the same location," which is not the same as using the same liquid crystal display to show speed and speed limit. We decline to equate one to the other.

District Court Interpretations

Cuozzo argues that its construction of "integrally attached" is supported by a U.S. District Court's construction of "integrally connecting" in *Safety Rail Source, LLC v. Bilco Co.*, 656 F.Supp.2d 468 (D.N.J. 2009). PO Resp. 8:16-18. According to Cuozzo, the District Court concluded that "integrally connecting" requires the connected pieces be joined to make up a single complete piece or unit, such that the connection becomes part of the single complete unit. PO Resp. 9:5-8.

Cuozzo also cites to *Sci. Specialties Inc. v. Thermo Fisher Sci. Inc.*, 684 F.Supp.2d 1187, 1191-1193 (N.D. Cal. 2010), for its determination that "integral and integrally must mean something more than contiguous." PO Resp. 9, n.3.

The Board's construction of "integrally attached" in this case is not at odds with the District Court's construction of "integrally connecting" in *Safety Rail Source, LLC*. According to Cuozzo, the District Court stated that weight must be given to "integrally." PO Resp. 8:18-20. The Board has given due weight to "integrally" as a modifier to "attached." The two parts must be physically joined together as one unit.

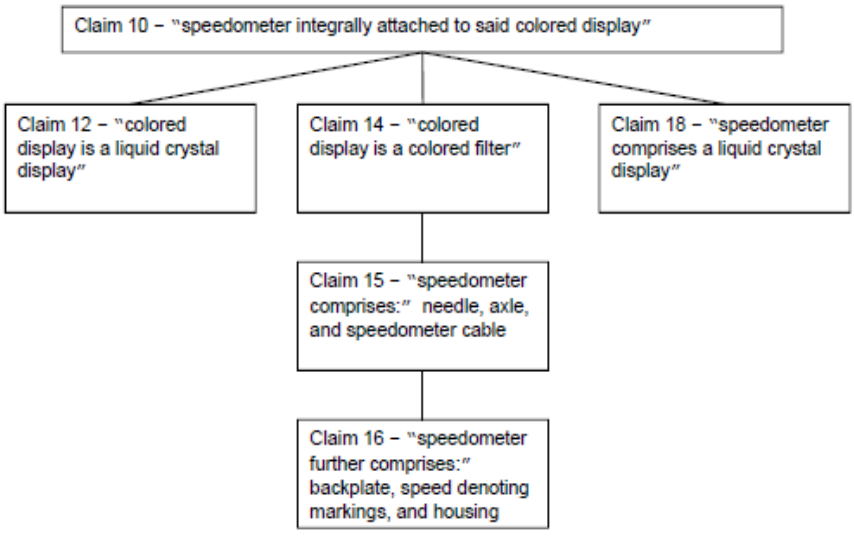
Cuozzo's arguments are unpersuasive. The terms at issue are different. "Attached" is not the same as "connecting." "Integrally attached" is not the same as "integrally connecting." The involved patents all have different disclosures. The field of invention and the level of ordinary skill in the art have not been shown to be the same for all cases. The arguments presented by the parties and the expert testimony on the issue have not been shown to be the same for all cases. Each case

must be decided on its own facts. Also, Cuozzo presents the terms at issue out of context, without the preceding and succeeding text in the involved claim or claims. There is not an adequate basis to make a proper comparison. Furthermore, district courts do not apply the rule of broadest reasonable interpretation for construing claim terms. Additionally, in the Board's construction, "integrally" has a significance that is more than just "contiguous."

Doctrine of Claim Differentiation

Cuozzo argues that the doctrine of claim differentiation supports its claim construction. PO Resp. 9-13. The argument is without merit.

An independent claim is presumed to be broader than a claim dependent thereon. Under the doctrine of claim differentiation, when a dependent claim adds a limitation relative to the independent claim on which it depends, there is a rebuttable presumption that the independent claim does not require that limitation. *Bancorp Servs. L.L.C. v. Sun Life Assur. Co. of Can.*, 687 F.3d 1266, 1275 (Fed. Cir. 2012); *Phillips v. AWH Corp.*, 415 F.3d 1303, 1315 (Fed. Cir. 2005). Cuozzo provides a diagram, reproduced below (PO Resp. 11):



The diagram illustrates the relationship between certain claims. We agree with Cuozzo's assertion that because each of dependent claims 12 and 18 additionally recites a liquid crystal display relative to independent claim 10, independent claim 10 is presumed not to require that liquid crystal display and, thus, may read on a mechanical embodiment. We also agree with Cuozzo's assertion that because each of dependent claims 14-16 additionally recites mechanical components for the colored display or the speedometer, independent claim 10 is presumed not to require those mechanical components and, thus, also may read on an electronic embodiment employing a liquid crystal display. It reasonably is not disputable, and has not been disputed by Garmin, that independent claim 10 reads on a mechanical embodiment as well as an electronic embodiment having at least one liquid crystal display, which either is the colored display (claim 12) or is comprised within the speedometer (claim 18).

The rest of Cuozzo's application of the doctrine of claim differentiation, however, is misplaced, as explained below, even though Cuozzo correctly notes that dependent claim 12 adds the feature that said colored display of claim 10 is a liquid crystal display, and that dependent claim 18 adds the feature that the speedometer of claim 10 comprises a liquid crystal display. PO Resp. 12:5-7.

Cuozzo contends that neither claim 12 nor claim 18, presumably via the respective feature added thereby, requires the speedometer's liquid crystal display to be separate from the colored display's liquid crystal display. PO Resp. 12:7-8. On that basis, Cuozzo asserts that claim 18 encompasses a single electronic display that itself operates as a speedometer, or at least the display portion of a speedometer, and a colored display. PO Resp. 12:15-17. Therefore, Cuozzo argues that because independent claim 10 is presumed to be broader than dependent claim 18, claim 10 also must not require the liquid crystal display of the

speedometer and the liquid crystal display of the colored display to be separate. PO Resp. 12:18 to 13:2. Cuozzo thus reasons that the "integrally attached" feature of independent claim 10 "must encompass a single electronic display that itself operates as a speedometer (or at least display portion of a speedometer) and a colored display." PO Resp. 13:3-7.

To the extent that it can be understood, we rephrase, more clearly, the reasoning of Cuozzo as follows:

> Because a feature added by dependent claim 12 or by dependent claim 18 does not include a requirement that the liquid crystal display of the speedometer (claim 18) and the liquid crystal display that is the colored display (claim 12) are separate liquid crystal displays, independent claim 10 also must not have that requirement. Thus, claim 10 must read on a single electronic display that operates as the speedometer display and as the colored display.

The doctrine of claim differentiation does not stand for the proposition that if a dependent claim does not add a certain limitation by further recitation, then the independent claim on which it depends is presumed to be without that limitation. The failure of a dependent claim to add a requirement in its recitations relative to an independent claim on which it depends cannot negate or nullify a limitation that is already in the independent claim. The doctrine of claim differentiation cannot broaden claims beyond their correct scope, determined in light of the specification and the prosecution history and any relevant extrinsic evidence. *Multiform Desiccants, Inc. v. Medzam, Ltd*., 133 F.3d 1473, 1480 (Fed. Cir. 1998).

A correct application of the doctrine of claim differentiation supports the Board's claim construction. Claim 13 indirectly depends on claim 10 through claim 12, and claim 13 specifies that the display controller adjusts the liquid crystal display independently of the speedometer. Claim 17 indirectly depends on claim 10 through claim 14, and claim 17 specifies that the display controller rotates the

colored filter independently of the speedometer. Such a claim structure means claim 10 must be sufficiently broad to cover the case in which the speedometer and the colored display retain their separate identities and are independently operable. Claim 10 cannot require a single integral display.

B. Antedating Aumayer and Awada

Aumayer has an effective filing date of October 19, 2000. Awada has an effective filing date of March 8, 2001. Both Aumayer and Awada qualify as prior art under 35 U.S.C. § 102(e)(2), because the effective filing date of each is earlier than the effective filing date of the '074 Patent.

Cuozzo has sought to disqualify Aumayer and Awada as prior art, by demonstrating a date of invention prior to the effective filing date of the references, because 35 U.S.C. § 102(e)(2) requires a prior art patent to have been filed "before the invention by the applicant for patent." *See, e.g.*, *Loral Fairchild Corp. v. Matsushita Elec*., 266 F.3d 1358, 1362 (Fed. Cir. 2001); *Mahurkar v. C.R. Bard, Inc*., 79 F.3d 1572, 1577 (Fed. Cir. 1996). Priority of invention goes to the first party to reduce to practice unless the other party can show that it was the first to conceive the invention and that it exercised reasonable diligence in later reducing that invention to practice. *Brown v. Barbacid*, 276 F.3d 1327, 1337 (Fed. Cir. 2002); *Cooper v. Goldfarb*, 154 F.3d 1321, 1327 (Fed. Cir. 1998); *Mahurkar*, 79 F.3d at 1577.

Conception

An inventor's testimony, standing alone, is insufficient to prove conception, as some form of corroboration is required. *Mahurkar*, 79 F.3d at 1577; *Price v. Symsek*, 988 F.2d 1187, 1194 (Fed. Cir. 1993). A rule of reason applies to determine whether the inventor's testimony has been corroborated. *Price*, 988 F.2d at 1194. The requirement for corroboration of inventor's testimony arose

out of a concern that inventors testifying at trial would be tempted to remember facts favorable to their case by the lure of protecting their patent or defeating another's patent. *Mahurkar*, 79 F.3d at 1577.

Cuozzo's inventor, Giuseppe A. Cuozzo, states in his declaration (Ex. 3001, ¶¶ 8-9) that on November 28, 1999, he was pulled over and ticketed by a police officer for speeding, and that while the officer was writing the ticket:

> I [Giuseppe A. Cuozzo] came up with the idea of using GPS technology combined with instrumentation for displaying a speed limit and its relation to vehicle speed in a manner that would alert a driver as to whether he or she was speeding without requiring the driver to refer to roadside speed limit signs.

The above-noted testimony of the inventor lacks corroboration. The driving record of the inventor, submitted as Exhibit B of Exhibit 3001, corroborates only that the inventor received a speeding ticket on November 28, 1999, not anything that Giuseppe A. Cuozzo conceived on that day. In that regard, there is only what the inventor himself states he conceived on that day.

Furthermore, Cuozzo has not explained adequately how the above-quoted idea properly accounts for (1) a colored display and adjustments of the colored display, as are recited in independent claim 10 and carried into dependent claims 14 and 17, (2) a colored filter as is recited in claim 14, and (3) a display controller that rotates the colored filter independently of the speedometer to update continuously the delineation of which speed readings are in violation of the speed limit at the vehicle's present location.

Accordingly, Cuozzo has not established that Giuseppe A. Cuozzo conceived of the invention of claims 10, 14, or 17, as of November 28, 1999.

Cuozzo also submitted the inventor's written disclosure to the Invention Submission Corporation, Exhibit E of Exhibit 3001, titled "Disclosure To ISC And

Record Of Invention," to show conception. Garmin does not dispute the sufficiency of the content of that disclosure for showing conception of the subject matter of claims 10, 14, and 17, and we are satisfied with the sufficiency of its technical content. In that regard, for purposes of antedating a prior art reference, the evidence of prior invention may be sufficient if it demonstrates obviousness of the claimed invention. *E.g.*, *In re Spiller*, 500 F.2d 1170, 1178 (CCPA 1974); *In re Stryker*, 435 F.2d 1340, 1341 (CCPA 1971).

However, the date of that invention disclosure needs corroboration other than the inventor's own representation. The disclosure document is a form including a series of questions with spaces filled-in by answers in handwriting presumably by the inventor Giuseppe A. Cuozzo, and the date of the document is partially filled-in by handwriting as "30th" day of "OCTOBER" 20"00." Exhibit E of Exhibit 3001. We recognize that our reviewing court has set forth clearly that corroboration is not required when a party seeks to prove conception through the use of physical exhibits. *Mahurkar*, 79 F.3d at 1577. But that principle is directed to the technical content of a document, not to the date or origin of the document.

The law requires sufficient proof for the date and identity of a physical exhibit offered to show conception. In that regard, the Federal Circuit stated "[t]his rule is not new to patent law" and observed:

> [C]onception by an inventor, for the purpose of establishing priority, **can not be proved by his mere allegation nor by his unsupported testimony where there has been no disclosure** to others or embodiment of the invention in some clearly perceptible form, such as drawings or model, **with sufficient proof of identity in point of time**. For otherwise[,] such facile means of establishing priority of invention would, in many cases, offer great temptation to perjury, and would have the effect of virtually precluding the adverse party from the possibility of rebutting such evidence. Hence it has been ruled in many cases that the mere unsupported evidence of the alleged

> inventor, on an issue of priority, as to . . . conception and the time thereof, can not be received as sufficient proof of . . . prior conception.

Price v. Symsek, 988 F.2d at 1194-95 (emphases added) (citations omitted).

The signature of a witness appears on the front page of the invention disclosure document, at a location just below the filled-in date of October 30, 2000. If the signature is authenticated by testimony of the witness, it would serve as effective corroboration that the document existed on October 30, 2000. However, Cuozzo offered no testimony from the witness and has not indicated the identity of the witness who presumably witnessed the document on October 30, 2000. Cuozzo also has not represented, much less established, that the copy of the invention disclosure document was obtained from files that have been maintained regularly or continuously as a routine business record, which may serve as circumstantial evidence of corroboration under a rule of reason analysis.

On this record, and under a rule of reason analysis, the earliest date of conception we accord Cuozzo is December 8, 2000. The record includes a letter from a patent attorney to the inventor, Exhibit H of Exhibit 3001, dated December 8, 2000, which refers to the inventor's "Disclosure to ISC and Record of Invention." A pertinent part of that letter is reproduced below (emphasis in original):

> You authorized ISC to provide us with information we require and have authorized us to provide ISC with information concerning the work we are performing on your behalf. We have received from ISC your **"Disclosure to ISC and Record of Invention"** and other materials relating to your invention and your relationship with ISC. We will immediately commence the preliminary patentability search.

Corroboration can be by independent circumstantial evidence. *Lacotte v. Thomas*, 758 F.2d 611, 613 (Fed. Cir. 1985). The source and content of the letter

constitutes sufficient independent circumstantial evidence to corroborate the existence of inventor's "Disclosure To ISC and Record of Invention" that is Exhibit E of Exhibit 3001, as of December 8, 2000.

Reasonable Diligence

We now turn to the issue of reasonable diligence toward reduction to practice. During the period in which reasonable diligence must be shown, there must be continuous exercise of reasonable diligence. *In re McIntosh*, 230 F.2d 615, 619 (CCPA 1956); *see also Burns v. Curtis*, 172 F.2d 588, 591 (CCPA 1949) (referring to "reasonably continuous activity"). A party alleging diligence must account for the entire critical period. *Griffith v. Kanamuru*, 816 F.2d 624, 626 (Fed. Cir. 1987); *Gould v. Schawlow*, 363 F.2d 908, 919 (CCPA 1966).

Even a short period of unexplained inactivity is sufficient to defeat a claim of diligence. *Morway v. Bondi*, 203 F.2d 742, 749 (CCPA 1953); *Ireland v. Smith*, 97 F.2d 95, 99-100 (CCPA 1938). In *In re Mulder*, 716 F.2d 1542, 1542-46 (Fed. Cir. 1983), the Federal Circuit affirmed a determination of lack of reasonable diligence, where the evidence of record was lacking for a two-day critical period. Likewise, in *Rieser v. Williams*, 255 F.2d 419, 424 (CCPA 1958), there was no diligence where no activity was shown during the first 13 days of the critical period.

A party alleging diligence must provide corroboration with evidence that is specific both as to facts and dates. *Gould v. Schawlow*, 363 F.2d at 920; *Kendall v. Searles*, 173 F.2d 986, 993 (CCPA 1949). The rule of reason does not dispense with the need for corroboration of diligence that is specific as to dates and facts. *Gould*, 363 F.2d at 920; *Kendall*, 173 F.2d at 993; *see also Coleman v. Dines*, 754 F.2d 353, 360 (Fed. Cir. 1985).

The record shows two extended periods of little activity, which have not been explained adequately. The first is approximately a two-month period extending from January 2001 to March 2, 2001, and the second is approximately a five-month period extending from March 10, 2001, to August 8, 2001. Both periods are subsequent to the effective filing date of Aumayer, and only the second period is subsequent to the effective filing date of Awada.

First Gap in Showing of Diligence

Inventor Mr. Cuozzo states in Paragraph 16 of his declaration, Exhibit 3001:

> 16. I received a preliminary report in January 2001 that identified several patents as potential prior art. I analyzed these patents and, on March 2, 2001, I sent my analysis to Monica Bealles, ISC Patent Services Coordinator, to forward to Mr. Kaardal [patent attorney], which she did on March 7, 2001. **Exhibit I** is a copy of my analysis, which I faxed to Ms. Bealles along with a copy of her forward to Mr. Kaardal.

The testimony is not specific as to when in January of 2001, Mr. Cuozzo received the preliminary report. On the issue of diligence, because Cuozzo would benefit with a later date of receipt of the preliminary report, we fairly can assume only the earliest day in January as the date of receipt of the report. *Cf.*, *Haultain v. De Windt*, 254 F.2d 141, 142 (CCPA 1958) (Where testimony places a date to be proven within a time period, no date earlier than the last day has been proven.).

Cuozzo has not explained why it took as long as two months for the inventor to provide comments on the preliminary report, which identified several patents as potential prior art. Specific facts have not been provided for the circumstances and activities that occurred during those two months. For instance, it has not been indicated, even generally, on which days Mr. Cuozzo reviewed and prepared comments on the preliminary search report and why he did not do so on other days. We cannot conclude that during the two-month period from January 1, 2001, to

March 2, 2001, there was reasonably continuous activity toward reducing the invention to practice, sufficient to support a determination of reasonable diligence.

Second Gap in Showing of Diligence

Mr. Cuozzo explains that on March 10, 2001, he received yet another "Preliminary Patentability Search Report" stating that "utility patent protection could potentially be obtainable for your invention." Ex. 3001 ¶ 17. Mr. Cuozzo explains that in light of the "good news" that his invention was potentially patentable, he then discussed the patent application process with ISC, and was informed that patenting referral services could not begin until he paid a minimum of $ 3,500 to ISC, and that the total cost was $ 9,945. Ex. 3001 ¶ 18. Mr. Cuozzo states that on August 8, 2001, he delivered a cashier's check to ISC for $ 9,545 and also paid the balance of $ 400 in cash. Ex. 3001 ¶ 19. Thus, approximately five months passed between the time when Mr. Cuozzo received notice, on March 10, 2001, in a patentability search report that a utility patent was potentially obtainable for his invention, to the time when Mr. Cuozzo commenced the patenting process with ISC on August 8, 2001, by paying the advance fee that was required by ISC.

To explain the extended duration of that time, Mr. Cuozzo stated in Paragraph 19 of his declaration, Exhibit 3001:

> The cost of the ISC Submission Agreement and patent services presented a significant financial obstacle to me, as I had insufficient income and financing through ISC was not an option. My only option was to use money that was in a trust account set up by my parents when I was a child. Gathering that money from the trust account and convincing my parents that I needed to do that took a few months.

The burden is on Cuozzo to show reasonable diligence covering the entirety of the approximately five-month critical period. The above-quoted testimony is not specific as to either dates or facts. The time of concern covers the period from

March 10, 2001, to August 8, 2001. The testimony indicates that the only obstacle standing in the way of commencing the patenting process was a minimum advance payment of $ 3,500, even though the entire cost would be $ 9,945, and that there was enough money in the trust account to cover the entire cost.

It is not clear, however, whether Mr. Cuozzo had authority to draw from the trust account or must obtain approval from his parents. While the Patent Owner Response states, on page 21, that the trust account was not accessible to Mr. Cuozzo, and cites to Paragraph 19 of Mr. Cuozzo's declaration, the testimony from Paragraph 19 of the declaration does not so indicate. On cross-examination, Mr. Cuozzo indicated that his parents exercised no control over the amount and frequency of payments from the trust account, which were fixed, and that he actually borrowed the money directly from his parents and then paid them back with money from his trust account when it was paid to him. Ex. 1024, 2-4.

Whether it is obtaining approval from parents to withdraw money from his trust account, or borrowing money from his parents to be paid back by future payments from his trust account, the declaration of Mr. Cuozzo does not present sufficient facts and dates for the approximately five-month critical period. The issue here lies with insufficiency of proof, and not with recognizing that efforts to obtain money to prepare and file a patent application do constitute qualifying activity. It is fund raising for purposes of commercial development, which does not constitute qualifying activity for diligence. *See, e.g.*, *Scott v. Koyama*, 281 F.3d 1243, 1247-48 (Fed. Cir. 2002), *Griffith*, 816 F.2d at 627.

Additionally, Cuozzo has not made known what other efforts, if any, Mr. Cuozzo made during the approximately five-month period, to secure the necessary funding, or at least the $ 3,500 required to initiate the patenting process. On cross-examination, Mr. Cuozzo stated that he did not try to borrow money from

anyone else. Ex. 1024, 4:106:11-13. The evidence does not support a conclusion that there was reasonably continuous activity in the approximately five-month period to secure funding to begin the patenting process, sufficient to support a determination of reasonable diligence from March 10, 2001, to August 8, 2001.

Cuozzo has not antedated successfully either Aumayer or Awada. At this stage in the proceeding, both Aumayer and Awada remain as applicable prior art against Cuozzo.

C. Claims 10, 14, and 17 as unpatentable over Aumayer, Evans, and Wendt

Aumayer

Aumayer discloses a method for displaying vehicle speed. Ex. 1001, Abstract: 1-5. Also, it discloses displaying to the driver the speed limit at the current location of the vehicle, as it states: "In addition, speed limits at the current location may be displayed on the speed scale itself by highlighting an appropriate scale mark or producing a scale mark of a different length or color." Ex. 1001, Abstract: 9-12. Aumayer further states that the current location of the vehicle may be determined by an on-board GPS. Ex. 1001, Abstract: 12-13.

Aumayer discloses that the speed limit at the current location of the vehicle is retrieved from a data storage media according to the current location. Ex. 1001, Abstract: 13-15, 4:45-53. Aumayer discloses an electronic embodiment of its invention, which makes use of a liquid crystal display, a plasma screen, or a cathode ray tube. Ex. 1001, 7:34-37. Figure 2d of Aumayer is reproduced below:

FIG. 2d

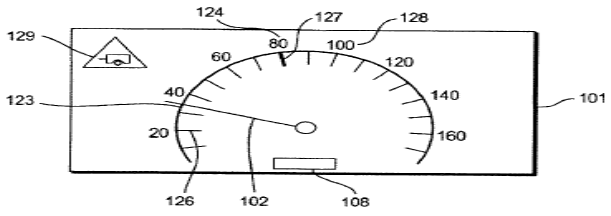


Figure 2d illustrates an embodiment of Aumayer's electronic display. Aumayer describes that the determined speed limit of 80 km/hr for the vehicle's current location is shown by the speed scale value 124 and speed scale mark 127 at the speed limit, both of which are highlighted or emphasized such as by use of color different from that used for the remainder of the display device, by enlargement, and/or by widening, on the electronic display. Ex. 1001, 6:21-27. Aumayer states expressly that the speed limit is highlighted or emphasized by the scale mark 127. Ex. 1001, 6:33-35.

Aumayer discloses continuously updating the applicable speed limit, based on the vehicle's current location. It states (Ex. 1001, 2:36-42):

> It is especially advantageous if an acoustic and/or optical warning signal is produced when the display of the actual vehicle speed and/or the speed limits or maximum allowed speed value changes. The user of the vehicle is thus signaled that he should now consider another speed limit and/or other physical units being used in the region in which the vehicle is now currently located.

Aumayer also discloses updating the stored speed limit data in the vehicle by a radio connection or a data carrier, as it recognizes that maximum speed values may change and desires to display "the correct speed limits." Ex. 1001, 2:57-61.

Aumayer further states that "it is also possible to use a commercial combined apparatus with mechanical display elements for the display device **211**." Ex. 1001, 7:42-44. Specific details of that mechanical embodiment are not described. However, Aumayer states that, for example, "a speed limit can be made visible by background lighting in a different color at the scale mark associated with the corresponding speed limit." Ex. 1001, 7:48-51.

As discussed above, Aumayer describes every feature of claim 10, except for the requirement that the speedometer is "integrally attached" to a colored display

that delineates which speed readings are in violation of the speed limit at the vehicle's present location. The single electronic display screen of Aumayer, showing both the image of a speedometer and a colored scale mark indicating the current speed limit, does not meet the claim recitation of a speedometer that is "integrally attached" to a colored display that delineates which speed readings are in violation of the speed limit at the vehicle's present location. The speedometer and the colored display are not discrete components joined to each other with each retaining its own separate identity.

Aumayer states that "it is also possible to use a commercial combined apparatus with mechanical display elements for the display device **211**." Ex. 1001, 7:42-44. Aumayer also states that "a speed limit can be made visible by background lighting in a different color at the scale mark associated with the corresponding speed limit." Ex. 1001, 7:48-51. But none of that indicates that a colored display necessarily is attached integrally to the speedometer.

Evans

Evans discloses a combined vehicle speedometer and speed warning indicator. Ex. 1009, 1:68 to 2:23. The speed warning indicator is installed on the speedometer cover. Ex. 1009, 2:16-17. It comprises a transparent plate attached to the front cover of the speedometer. Ex. 1009, 2:1-3. Evans describes the speed warning indicator as follows, Ex. 1009, 2:3-8 (emphasis added):

> The plate bears **warning indicia**, for example, **a special color and/or a plurality of marks, spaces, ridges, etc**. so that when the speedometer dial is viewed through it, a portion of the dial representing speeds in excess of a predetermined limit are demarked by the warning indicia.

Evans describes that a driver can tell what speeds are under or in excess of the speed limit by making a swift reference to the speedometer through the

indicator and seeing whether the speedometer needle is in or out of the warning area on the indicator plate. Ex. 1009, 2:9-13. Evans further describes that the indicator plate can be made adjustable for changes in the speed limit. Ex. 1009, 2:18-19. As shown in Figure 3, reproduced below, the red colored plate 12 is positioned on speed dial 30 so that only the portion of the dial that contains numbers representing speeds in excess of the speed limit is overlaid by the plate:

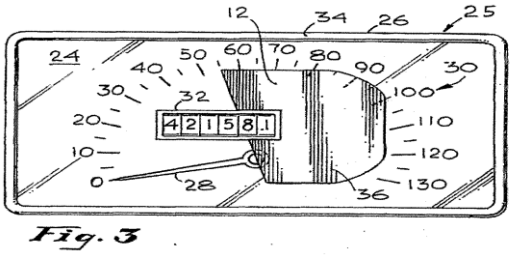


Fig. 3

Figure 3 illustrates the speedometer display and colored plate combination of Evans. The colored plate 12 of Evans is a fixed structure integrally attached to the speedometer. Although the plate may be removed and replaced, in its operational state it is a fixed, non-moveable, and non-adjustable structure. In that respect, Evans states, Ex. 1009, 3:37-44:

> It will be understood that plate **12** can, if desired, be removed from cover **24** and either another similar plate of different configuration can be substituted or plate **12** can be recut and repositioned or merely repositioned on cover **24** so as to extend over another range of speed numbers on dial **30**. For example this would be desirable in the event that the 55 mph current speed limit were abolished.

Wendt

Wendt's invention relates to an automobile speed limit indicator adapted to be used "upon the speedometer of any automobile by being readily attached and adjusted at all times to indicate the proper speed limit by means of a pointer." Ex. 1011, 1:15-20. The speed limit indicator is attachable by a suction cup to the

glass cover of a speedometer, and includes a moveable pointer preferably provided with a handle or a knob. Ex. 1011, 2:30-41; 3:12-16. Figure 4 is shown below:

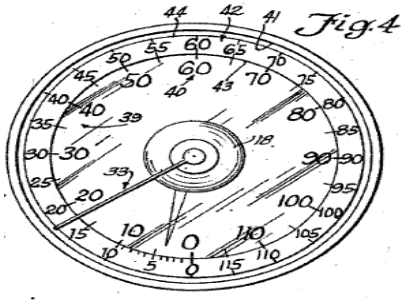


Figure 4 illustrates a front plan view of the speed limit indicator already attached to the glass cover of a speedometer. Wendt describes that when the vehicle operator observes that the speed limit is 20, he turns the pointer 16 to the speedometer indication 20, and that if the speed limit changes to 25, 30, or 35, or whatever it may be, the driver again should adjust the pointer by rotating the knob 17. Ex. 1011, 3:17-25.

The Obviousness Reasoning

In an obviousness analysis, it is not necessary to find precise teachings in the prior art directed to the specific subject matter claimed because inferences and creative steps that a person of ordinary skill in the art would employ can be taken into account. *See KSR Int'l Co.*, 550 U.S. at 418. A basis to combine teachings need not be stated expressly in any prior art reference. *In re Kahn*, 441 F.3d 977, 987-88 (Fed. Cir. 2006). There need only be an articulated reasoning with rational underpinnings to support a motivation to combine teachings. *Id.* at 988. Also, the level of ordinary skill in the art usually is evidenced by the references themselves. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001); *In re GPAC Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995); *In re Oelrich*, 579 F.2d 86, 91 (CCPA 1978).

As discussed above, Evans describes a colored plate for indicating the speed limit, which plate is attached integrally to the speedometer in a fixed position but

replaceable by a plate having a different shape to reflect a different speed limit. Also as discussed above, Wendt describes use of a rotatable pointer for indicating the applicable speed limit dynamically. Such disclosures of Evans and Wendt logically would have suggested to one with ordinary skill in the art that the colored plate of Evans can be made dynamically-adjustable by the driver.

In light of Aumayer's electronic speed limit indicator, which makes use of a GPS receiver to determine a vehicle's current location, and which then makes use of the determined location to look up the applicable speed limit at that location for display, one with ordinary skill in the art would have known to apply the same automated approach to the manually-adjustable colored plate suggested by Evans and Wendt. One with ordinary skill possesses ordinary creativity and is not an automaton. *KSR Int'l Co.*, 550 U.S. at 421. In that connection, one with ordinary skill would have recognized and appreciated that the manually-adjustable colored plate of Evans and Wendt can be improved by adding automatic control if the dynamic settings are automatically determinable, as in the case of Aumayer's device. *See, e.g.*, *Leapfrog Enters., Inc. v. Fisher-Price, Inc.*, 485 F.3d 1157, 1161-62 (Fed. Cir. 2007). Cuozzo does not argue that one with ordinary skill in the art would not have known how to implement the automatic control on the manually-adjustable colored plate of Evans and Wendt.

Cuozzo argues that Aumayer does not disclose updating continuously the delineation of which speed limit readings are in violation of the speed limit at a vehicle's present location, as is recited in claim 10, because, according to Cuozzo, the speed limit discussed in Aumayer "is a speed limit for a certain class of road in a given region and is not based on the 'vehicle's present location.'" PO Resp. 25:1-5. Cuozzo notes that one with ordinary skill would not consider a region, such as a state, country, or city, as a vehicle's present location. PO Resp. 25:9-11.

The argument is misplaced. Based on facts determined above with regard to Aumayer, it is indisputable that Aumayer displays the speed limit for the current location of a vehicle as determined by a GPS receiver, and not merely the speed limit for a certain class of road in a given region without any connection to the vehicle's current location. Cuozzo does not address, meaningfully, the portions of Aumayer identified and discussed above. Rather, Cuozzo focuses on the manner in which Aumayer obtains the speed limit for the present location of the vehicle.

Cuozzo has identified nothing in the claims that precludes a system from first dividing all possible locations into regions and class of roads within each region, then storing speed limit information based on such organization, and then looking up the applicable speed limit based on a vehicle's current location as determined by a GPS receiver and where that current location falls within the classification. Aumayer discloses that a region is an area having the same speed limit for the same type of streets or roads. Ex. 1001, 8:1-6. Aumayer also discloses that as a vehicle travels from one class of street or road to another, the speed limit display will be changed to reflect any change in the applicable speed limit. Ex. 1001, 5:2-5; 5:63; 2:57-59. It is inconsequential that Aumayer obtains the speed limit for a vehicle's present location by accessing a database, which is organized by regions and class of roads within each region. The updating is as continuous as it needs to be to indicate the speed limit at the current location.

Furthermore, Cuozzo has articulated no purpose, let alone any benefit noted in the disclosure of Aumayer, for displaying to the driver of a vehicle the speed limit of any class of road in any region, when the vehicle is not presently on that class of road in that region. That is not the invention or the disclosure of Aumayer.

Cuozzo argues that one with ordinary skill in the art would not have combined the dynamic, continuously controlled display system of Aumayer with

the immovable color plate 12 of Evans or the manually rotated pointer 16 and rubber suction cup unit of Wendt. PO Resp. 27:6-10. The argument is without merit. The reasoning for arriving at the invention of claim 10, based on the collective teachings of Aumayer, Evans, and Wendt, is articulated and explained above and is not undermined by Cuozzo's argument. As discussed above, one with ordinary skill would have recognized that the dynamically-adjustable colored plate suggested by Evans and Wendt can be improved by adding automatic control, if the dynamic settings are automatically-determinable.

Teaching Away Argument

Cuozzo further argues that all three of Aumayer, Evans, and Wendt teach away from a combination of Aumayer, Evans, and Wendt. The argument is not supported by the respective reference disclosures.

To constitute properly a "teaching away," the teaching must be evaluated from a technological perspective, not merely a comparative perspective. For instance, it is not a "teaching away" of significance unless one with ordinary skill in the art would have understood the teaching as conveying that the method or structural configuration at issue reasonably cannot be expected to achieve what it is required to achieve according to the claimed invention. *See, e.g.*, *Syntex (U.S.A) LLC v. Apotex, Inc.*, 407 F.3d 1371, 1380 (Fed. Cir. 2005) ("Under the proper legal standard, a reference will teach away when it suggests that the developments flowing from its disclosures are unlikely to produce the objective of the applicant's invention." (citing *In re Gurley*, 27 F.3d 551, 553 (Fed. Cir. 1994))).

A prior art reference must be considered for everything it teaches by way of technology and is not limited to the particular invention it is describing and attempting to protect. *EWP Corp. v. Reliance Universal Inc.*, 755 F.2d 898, 907 (Fed. Cir. 1985). The use of patents as references is not limited to what the

patentees describe as their own inventions or to the problems with which they are concerned, as they are a part of the literature and are relevant for all they contain. *In re Heck*, 699 F.2d 1331, 1333 (Fed. Cir. 1983) (citing *In re Lemelson*, 397 F.2d 1006, 1009 (CCPA 1968)).

There is no requirement that anything disclosed in a prior art reference, such as its stated purpose, goal, or objectives, must be preserved or further developed by every reliance on its teachings as prior art. All of the disclosures of a prior art reference, including non-preferred embodiments, must be considered. *In re Lamberti*, 545 F.2d 747, 750 (CCPA 1976); *see also In re Susi*, 440 F.2d 442, 446 n.3 (CCPA 1971) (one is not significantly "taught away" from a "particularly preferred embodiment" by the suggestion that something else may be even better).

According to Cuozzo, because Aumayer describes that its combined instrument (one device for use in multiple countries) "advantageously comprises a display screen so that the method according to the invention can be performed without mechanical or structural arrangements," Ex. 1001, 2:49-53, it teaches away from combining with Evans and Wendt. PO Resp. 27:10-20. For reasons discussed above, the argument is without merit. A mechanical embodiment is not described as inoperative, just less advantageous or less preferred.

According to Cuozzo, Evans states that use of a speedometer of a special design "like the combined instrument in Aumayer" would be too expensive and unsuccessful. PO Resp. 28:9-17. That is simply incorrect. Evans was issued in 1976 and Aumayer in 2003. Evans could not have been referring specifically to the device of Aumayer. Evans does state that certain specialized speed limit indicator devices have been used in the past but not extensively or successfully. Ex. 1009, 1:46-52. That does not teach away from applying the transparent

colored plate of the combined teachings of Evans and Wendt to the glass cover of Aumayer's speed limit indicator.

Evans describes that prior speed limit indicators were expensive and invariably required disassembly of the vehicle speedometer or construction of a new speedometer to substitute for the one with which a vehicle initially is equipped. Ex. 1009, 1:46-52. That does not mean the preexisting speed limit indicators were inoperative or nonfunctional, and certainly not that Aumayer's speed limit indicator appearing 27 years later will be inoperative or nonfunctional, particularly if it is to incorporate the transparent colored plate according to the combined teachings of Evans and Wendt.

According to Cuozzo, the device of Wendt was meant to work with a mechanical speedometer. That is true, but it does not mean Wendt discloses that its device cannot work with a speedometer with an electronic display. It also does not mean that a combined device of Evans and Wendt will be inoperative, or nonfunctional, if applied to the glass cover of an electronic display.

Cuozzo argues that Wendt teaches away from an automatically adjusting speed limit display such as that disclosed by Aumayer, because Wendt discloses benefits for having the driver manually manipulate the mechanical pointer to adjust the speed limit indication. PO Resp. 29:3-10. The pertinent portion of Wendt is reproduced below (Ex. 1011, 5:8-15):

> The present speed indicator, when used on a speedometer, will discipline the driver and cause him to look for and observe speed limit signs and then make a temporary record of the speed limit by moving the pointer to that point on the speedometer.
>
> It will be a useful aid to the driver to prevent him from forgetting the speed limit and to remind him that the speedometer pointer must not pass the speed limit pointer.

The above-quoted text would not have conveyed to one with ordinary skill in the art that automatic updating of the speed limit display without driver participation cannot be accomplished or would be inoperative or nonfunctional. Rather, one with ordinary skill in the art would have recognized and appreciated that automatic updating of the speed limit display provides the driver of the vehicle a different kind of reminder, a visual reminder through the automatically updated display. Also, as discussed above, there is no requirement that in determining obviousness, every goal or objective of a prior art reference must be advanced when relying on any technical disclosure of the reference. The obviousness analysis is not an attempt to incorporate every feature of each reference. The value of a prior art reference is not limited to the particular invention it is describing and attempting to protect. *EWP Corp.*, 755 F.2d at 907.

All of Cuozzo's arguments alleging a "teaching away" of the combined teachings of Aumayer, Evans, and Wendt are without merit.

Claim 14 depends on claim 10, and claim 17 depends on claim 14. We are persuaded that claims 10, 14, and 17 would have been obvious over the combined teachings of Aumayer, Evans, and Wendt. With regard to claims 14 and 17, Cuozzo makes no argument separate from those it has raised with respect to claim 10 and already discussed above. With respect to claim 14, we note that the colored display according to the combined teachings of Evans and Wendt is a colored filter. With respect to claim 17, we note that the colored filter according to the combined teachings of Evans and Wendt would be rotated independently by a controller to update continuously the delineation of which speed readings are in violation of the speed limit at the vehicle's present location.

D. Claims 10, 14, and 17 as unpatentable over Tegethoff, Awada, Evans, and Wendt

Tegethoff

Tegethoff discloses an image display system for use on a vehicle, which includes an image screen and an image generating computer. Ex. 1003, 4:2:16-18. The image displayed on the screen imitates analog mechanical pointer instruments, and in image form cannot be distinguished from actual mechanical devices. Ex. 1003, 4:2:34-40.

Figure 2 of Tegethoff is reproduced below:

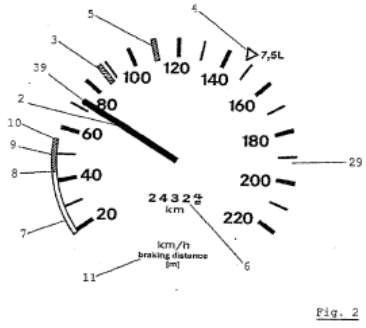


Figure 2 illustrates an image of Tegethoff's speedometer display. Ex. 1003, 5:2:30-32. On the image shown is a mark 5 for indicating the currently permissible maximum speed for the road section where the vehicle is located. Ex. 1003, 6:1:9-12. That maximum speed can be set according to an element for navigation and a database. Ex. 1003, 6:1:13-15. Tegethoff describes that the critical markings such as that showing the speed limit can be colored red. Ex. 1003, 7:1:38-45.

Awada

Awada discloses a method and apparatus for reporting the legal speed limit to the driver of a vehicle. Exhibit 1010, 1:36-38. Awada describes using a GPS receiver to determine the present location of the vehicle, and then using that

determined position as a search key in a database to retrieve speed limit for that location. Ex. 1010, 1:39-43. The retrieved speed limit then is reported to the driver. Ex. 1010, 1:43-44. Awada discloses that the database of speed limit information may be stored locally or stored in a remote location that is accessible by a wireless communication link. Ex. 1010, 1:39-47. Awada further discloses that in one embodiment a warning chime is played through a speaker or through the earpiece of the driver's cellular telephone, if the vehicle exceeds the speed limit. Ex. 1010, 1:50-55.

Figure 1 of Awada is reproduced below:

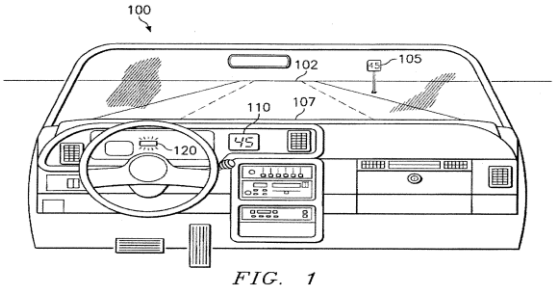


Figure 1 illustrates an embodiment of Awada's speed limit display. As is depicted in Figure 1, a vehicle is traveling on road 102, which has a posted legal speed limit 105, and mounted on the dashboard 107 of the vehicle is a display 110, which shows the driver the speed limit at the vehicle's current location. Ex. 1010, 2:24-30. Also mounted on the dashboard is a warning light 120, which indicates when the vehicle exceeds the speed limit. Ex. 1010, 2:30-31.

The Obviousness Reasoning

We first address a key argument advanced by Cuozzo, i.e., that the reference to "maximum permissible speed" in Tegethoff is not directed to the speed limit contemplated by the claimed invention, i.e., the legal speed limit. We agree with Cuozzo, that "speed limit" in claim 10 of the '074 Patent means the legal speed limit. However, a legislative speed limit is a legal speed limit.

Cuozzo notes that Tegethoff describes that the "maximum permissible speed" can be set in one of three ways: (1) manually by the driver, (2) "according to an element for navigation and a database with traffic control information," and (3) "by an element for receiving transmitters outside the vehicle for traffic control." PO Resp. 30:11-16. Cuozzo states that none of those ways suggests that the "maximum permissible speed" is the legal speed limit. PO Resp. 30:16-18.

Cuozzo's argument is unpersuasive. It fails to address other language in the disclosure of Tegethoff. In particular, Tegethoff states, Ex. 1003, 7:1:38-48 (emphasis added):

> With the markings shown above in the shape of marks or display bars, the coloring can also help quicker classification of information by the driver. Thus, for example, warnings that require immediate action or represent a critical technical or **legislative limit**, can appear in the color red (e.g., a **maximum speed** or the part of the breaking distance or stopping distance that exceeds the distance to the vehicle ahead).

In light of the above-quoted text referring to the "legislative limit" in the context of a "maximum speed," one with ordinary skill in the art would have recognized that Tegethoff discloses the legislative speed limit as one form of implementation of what is referred to as "maximum permissible speed" in the disclosure of Tegethoff. At the very least, Tegethoff reasonably would have suggested the legislative speed limit as the "maximum permissible speed."

Tegethoff is not sufficiently specific about how its system obtains the "maximum permissible speed," for example, the legislative speed limit. Awada, however, discloses that the legal speed limit can be obtained by using a GPS receiver to obtain the present location of a vehicle, and then using that determined location to access a speed limit database to retrieve the speed limit at the vehicle's current location. Ex. 1010, 1:39-43, 2:24-42.

In light of Tegethoff and Awada, one with ordinary skill in the art would have known to use the method disclosed in Awada to obtain the legal speed limit at the vehicle's current location and regard it as the "maximum permissible speed" in Tegethoff. Tegethoff even specifically mentions the use of "an element for navigation" for setting the maximum speed. Ex. 1003, 6:1:13-16.

As described above, Tegethoff and Awada collectively account for every feature of claim 10, except for the requirement that the speedometer is "integrally attached" to a colored display that delineates which speed readings are in violation of the speed limit at the vehicle's present location. The single electronic display screen of Tegethoff, showing both the image of a speedometer and a colored scale mark indicating the current speed limit, does not meet the claim recitation of a speedometer that is attached integrally to a colored display that delineates which speed readings are in violation of the speed limit at the vehicle's present location. As is the case with Aumayer, described above, the speedometer and the colored display are not discrete components joined to each other with each retaining its own identity. Rather, there is a single integral display, which performs the function of both the speedometer and colored display.

In light of the colored plate in Evans for indicating the speed limit, which plate is attached integrally to the speedometer in a fixed manner but replaceable by a plate having a different shape to reflect a different speed limit, and also the rotatable pointer of Wendt for indicating the applicable speed limit dynamically, one with ordinary skill in the art would have known to make Evans' colored plate manually-adjustable by the driver to reflect changes in speed limit dynamically.

Based on the combined teachings of Tegethoff and Awada with regard to a speed limit indicator that makes use of a GPS receiver to determine a vehicle's current location, and then makes use of the determined location to look up the

speed limit at that location for display, one with ordinary skill in the art would have known to apply an automated approach to the manually-adjustable colored plate of Evans and Wendt. One with ordinary skill would have recognized that the manually-adjustable colored plate of Evans and Wendt can be improved by adding automatic control provided by a GPS receiver and electronically stored speed limit values based on vehicle location, as is disclosed by Tegethoff and Awada. *See, e.g.*, *Leapfrog Enters., Inc.*, 485 F.3d at 1161-62.

Cuozzo argues that Awada merely discusses reporting the speed limit to the driver and nowhere mentions displaying the speed of the vehicle to the driver, much less delineating which "speed readings" of the vehicle are in violation of the applicable speed limit. PO Resp. 32:1-13. The argument is misplaced, because Awada is relied on solely for its teachings of how to obtain the speed limit for the current location of the vehicle. One cannot show non-obviousness by attacking references individually where the grounds of unpatentability are based on combinations of references. *In re Merck*, 800 F.2d 1091, 1097 (Fed. Cir. 1986); *In re Keller*, 642 F.2d 413, 426 (CCPA 1981).

Cuozzo argues that neither Evans nor Wendt discloses or suggests the use of a display controller or a global positioning system receiver. PO Resp. 32:19 to 33:1. That argument equally is misplaced, as it is also premised on attacking the references individually when the ground of unpatentability is based on a combination of references. Evans and Wendt are not relied on for teaching or suggesting the use of a display controller or a global positioning system receiver. Cuozzo's contention does not undermine the obviousness rationale based on the combined teachings of Tegethoff, Awada, Evans, and Wendt.

Cuozzo argues that one with ordinary skill would not have combined Awada's dynamic speed limit display system with the immoveable colored plate

12 of Evans. PO Resp. 34:10-13; 35:2-4. The argument again is misplaced, for attacking references individually cannot show non-obviousness where the ground of unpatentability is based on a combination of references. Evans and Wendt in combination suggest a manually-adjustable colored plate for indicating the speed limit. Cuozzo's reading of Evans as disclosing an "immovable" colored plate that is not combinable with "dynamic" aspects of Awada's system fails to consider the teachings of Evans and Wendt in collectively conveying an adjustable colored plate indicative of the speed limit.

Cuozzo further makes a number of "teaching away" arguments, all of which misapply the concept of "teaching away" in a similar manner as we have rejected its "teaching away" arguments in the context of Aumayer, Evans, and Wendt.

First, Cuozzo contends that both Tegethoff's and Wendt's manually-adjustable control teach away from a combination with Awada because the potential to set the alert at above the speed limit is contrary to Awada's goal of being alerted when the speed limit is exceeded. PO Resp. 33:14 to 34:2; 34:4-6; 34:19 to 35:5. The argument is without merit. Each of Tegethoff and Wendt is concerned with being alerted of the vehicle's exceeding the legal speed limit. A manual setting is just one implementation of Tegethoff. Other implementations rely on a navigation device and a database. Ex. 1003, 6:1:13-18.

Secondly, Cuozzo argues that Tegethoff and Awada teach away from mechanical speedometers like those used in Evans and Wendt. PO Resp. 35:6 to 36:7. Cuozzo refers to this language in Tegethoff (Ex. 1003, 2:2:33-40):

> The object of the present invention is to create a display system that has the good readability of analog pointer instruments and, moreover, in an easily understandable manner provides additional information that facilitates the safe and economical operation of the vehicle. This object is attained with a display system.

> Cuozzo also refers to this language in Awada (Ex. 1010, 1:17-20):
>
> In such cases, it would be helpful if the driver were provided with a constant indication of the posted speed limit, as a display on the dashboard of an automobile, for instance.

Cuozzo's "teaching away" argument is misplaced. The fact that Tegethoff recognizes a benefit of an electronic display over a mechanical speedometer does not mean that elements designed for use with the latter, such as the manually-adjustable colored display of Evans and Wendt, have been indicated as unusable with a speedometer having an electronic display. Even though the device of Evans and Wendt is designed to work with a conventional mechanical speedometer, one with ordinary skill in the art would have recognized that the colored display of Evans and Wendt can be mounted to the glass cover of either a conventional mechanical speedometer or an electronic version of the same. With regard to the above-quoted statement in Awada, Cuozzo fails to point to credible evidence reasonably indicating that the colored display according to the combined teachings of Evans and Wendt cannot be put under automatic control.

In any event, as we already have discussed above, specific goals and advantages noted in a prior art reference need not always be preserved when relying on its technical teachings. A prior art reference must be considered for everything it teaches by way of technology and is not limited to the particular invention it is describing and attempting to protect. *EWP Corp.*, 755 F.2d at 907.

According to Cuozzo, Evans states that use of a speedometer of a special design "like the display system in Tegethoff and the automatic display system of Awada would be too expensive and unsuccessful." PO Resp. 36:7-9. That is simply incorrect. Evans issued in 1976; Tegethoff issued in 1998; and Awada issued in 2003. Evans could not have been referring specifically to the device of

Tegethoff or Awada. Evans does state that certain specialized speed limit indicator devices have been used in the past but not extensively or successfully. Ex. 1009, 1:46-52. It is not evident what that has to do with a teaching away from applying the transparent colored plate of Evans and Wendt to the glass cover of an electronic speed limit indicator of Tegethoff and Awada.

Evans describes that prior speed limit indicators were expensive and required disassembly of the speedometer or construction of a new speedometer. Ex. 1009, 1:46-52. That does not mean preexisting indicators were inoperative or nonfunctional, and certainly not that Tegethoff's or Awada's indicator appearing twenty-two and twenty-seven years later, respectively, will be inoperative or nonfunctional.

According to Cuozzo, the device of Wendt was meant to work in conjunction with a standard mechanical speedometer. However, that does not mean Wendt discloses that its device cannot work with a speedometer having an electronic display. It also does not mean that a combined device of Evans and Wendt will be inoperative, or nonfunctional, if applied to the glass cover of a speedometer with an electronic display.

Cuozzo argues that Wendt teaches away from automatically adjusting the speed limit display, because Wendt discloses benefits for having the driver manually manipulate the mechanical pointer. PO Resp. 37:1-8. We already have rejected that argument in the context of the obviousness ground over Aumayer, Evans, and Wendt. We note further that one with ordinary skill in the art would have recognized that automatic updating of the speed limit display provides the driver a different kind of reminder than that provided by physical manipulation.

Cuozzo's arguments alleging a "teaching away" from a combination of Aumayer, Evans, and Wendt that meets the claimed invention are unpersuasive.

We are persuaded that claims 10, 14, and 17 would have been obvious over Tegethoff, Awada, Evans, and Wendt. With regard to claims 14 and 17, Cuozzo makes no argument separate from those it has raised for claim 10.

E. Cuozzo's Motion to Amend Claims

Cuozzo filed a motion (Paper 32) to amend claims. Cuozzo seeks to replace claim 10 with substitute claim 21, claim 14 with substitute claim 22, and claim 17 with substitute claim 23. Claims 22 and 23 each depend on claim 21.

With respect to claim 10, substitute claim 21 adds:

> wherein the speedometer comprises a liquid crystal display, and wherein the colored display is the liquid crystal display.

The above-noted addition represents more than just incorporating the limitations of original dependent claims 12 and 18 into independent claim 10, because claim 18 recited only that the speedometer comprises a liquid crystal display, not also that the colored display is that same liquid crystal display.

Also included within substitute claim 21 is this limitation pre-existing in claim 10: a speedometer integrally attached to said colored display.

Thus, as written in proposed substitute claim 21, the speedometer has to be "integrally attached" to a colored display, which is a liquid crystal display and which also is a component comprised within the speedometer itself.

Per 35 U.S.C. § 316(d)(3), a claim amendment in an *inter partes* review may not enlarge the scope of the claims of the patent or introduce new matter.

The Patent Owner has the burden to set forth written description support in the original disclosure for each added or amended claim. 37 C.F.R. § 42.121(b)(1). Given the proper construction of "integrally attached," in the context of the original disclosure, Cuozzo has not shown that the original disclosure of the '074 Patent provides written description for this trifecta: (1) speedometer

comprises a liquid crystal display; (2) colored display is that liquid crystal display comprised by the speedometer; and (3) the speedometer is attached integrally to that colored display, which is the liquid crystal display comprised by the speedometer.

Cuozzo points to original patent claim 18 for describing "wherein the speedometer comprises a liquid crystal display." Motion, at 7:3-8. It does. For each of the other two elements in the trifecta, both requiring the colored display to be "the" liquid crystal display comprised by the speedometer, Cuozzo merely points to the disclosure, which indicates that the colored display "is **a** liquid crystal display" (claim 12, emphasis added), "may take the form of **a** colored filter" (Ex. 3006, 3:3-6, emphasis added), and "could also take the form of **a** liquid crystal display" (Ex. 3006, 6:11-14, emphasis added). Motion (Paper 32) at 7:9-15. The showing is not commensurate in scope with what is claimed, i.e., that the colored display is the liquid crystal display comprised by the speedometer.

Cuozzo does not adequately explain how the evidence relied on describes the "integrally attached" requirement between the speedometer and the colored display where the colored display is the liquid crystal display comprised by the speedometer. In that regard, we note further the analysis contained in the claim construction section of this opinion, which concludes that the original disclosure of the '074 Patent does not describe an embodiment using a single liquid crystal display to show the speed readings of a speedometer as well as the delineations of which speed readings violate the speed limit at the vehicle's present location.

Cuozzo has failed to set forth how proposed substitute claims 21-23 satisfy the written description requirement of 35 U.S.C. § 112, first paragraph.

Substitute claims 21-23 also enlarge the scope of the respective original patent claims which they replace. As is pointed out by Garmin, a proper

construction of "a speedometer integrally attached to said colored display" in the context of original patent claims 10, 14, and 17, and as articulated by the Board, does not cover a speedometer and a colored display that is subsumed completely within the speedometer. Yet, that arrangement would be within the scope of substitute claim 21, as Cuozzo redefines the meaning of "integrally attached." The scope of each of claims 10, 14, and 17 has been enlarged because a structure not covered by those claims would be covered by respective substitute claims 21-23.

F. Cuozzo's Motion to Exclude Evidence

Cuozzo seeks to exclude certain testimony of Prof. James Morris. Motion (Paper 48), at 2:5-8. The motion is *dismissed* as moot, because we have not reached the merits of Garmin's argument that relied on the testimony Cuozzo seeks to exclude, i.e., the argument that substitute claim 23 enlarges the scope of original patent claim 17, because claim 23 has been broadened to cover displaying a single speed reading in red once the speed reading exceeds the speed limit.

CONCLUSION

Garmin has met its burden of proof by a preponderance of the evidence in showing that claims 10, 14, and 17 of the '074 Patent are unpatentable under 35 U.S.C. § 103: (1) as obvious over Aumayer, Evans, and Wendt, and (2) as obvious over Tegethoff, Awada, Evans, and Wendt.

In consideration of the foregoing, it is

ORDERED that claims 10, 14, and 17, of the '074 patent are CANCELLED;

FURTHER ORDERED that Cuozzo's Motion to Exclude Evidence is *dismissed*; and

FURTHER ORDERED Cuozzo's Motion to Amend Claims is *denied*.

Case IPR2012-00001
Patent 6,778,074

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US006778074B1

(12) **United States Patent**
Cuozzo

(10) **Patent No.: US 6,778,074 B1**
(45) **Date of Patent: Aug. 17, 2004**

(54) **SPEED LIMIT INDICATOR AND METHOD FOR DISPLAYING SPEED AND THE RELEVANT SPEED LIMIT**

(76) Inventor: **Giuseppe A. Cuozzo**, 17 Maple St., Bloomfield, NJ (US) 07003

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 114 days.

(21) Appl. No.: **10/100,378**

(22) Filed: **Mar. 18, 2002**

(51) **Int. Cl.**[7] **B60Q 1/00**
(52) **U.S. Cl.** **340/441**; 340/905; 340/988
(58) **Field of Search** 340/441, 905, 340/438, 901, 988; 701/117, 119, 202

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5,485,161 A	*	1/1996	Vaughn	342/357.13
5,680,306 A	*	10/1997	Shin et al.	180/167
5,819,198 A	*	10/1998	Peretz	701/117
D411,122 S	*	6/1999	Velazquez	D10/98
5,995,895 A	*	11/1999	Watt et al.	701/50
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6,161,072 A	*	12/2000	Clapper	701/93
6,265,989 B1	*	7/2001	Taylor	340/901
6,515,596 B2	*	2/2003	Awada	340/905

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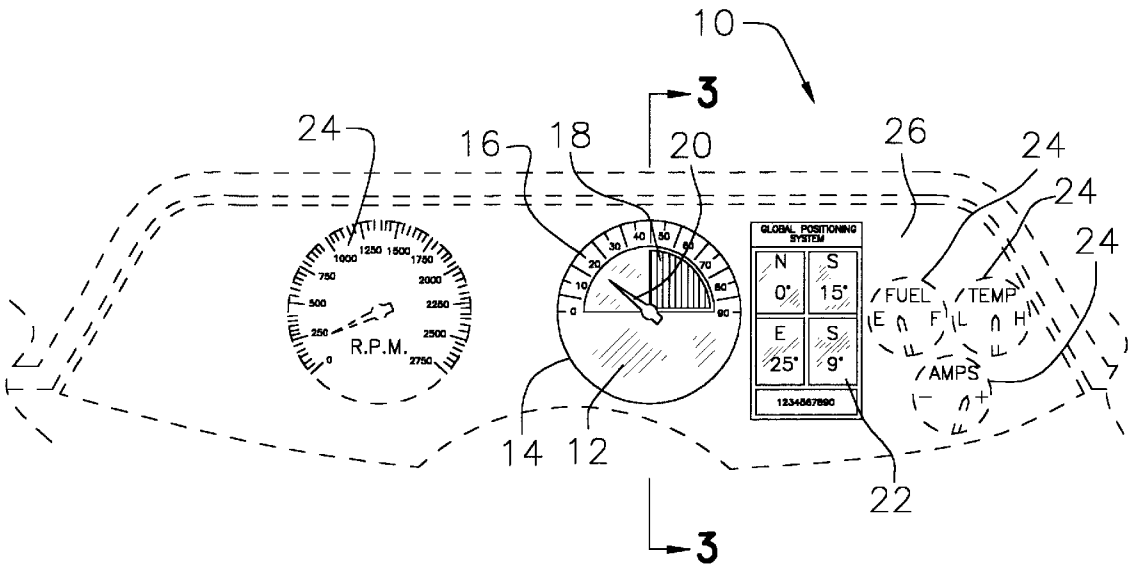
Primary Examiner—Nina Tong

(57) **ABSTRACT**

Speed limit indicators and methods for determining speed, the relevant speed limit, and displaying same make it easy for the driver of a vehicle to compare his current speed with the legal limit for the location in which he is traveling. This eliminates the need for the driver to take his eyes off the road to look for speed limit signs, thereby reducing the chance of an accident, and resolves any confusion that might exist as to what the current legal limit is. An audible warning of excessive speed reduces the amount of time the driver needs to spend examining the speedometer.

20 Claims, 3 Drawing Sheets



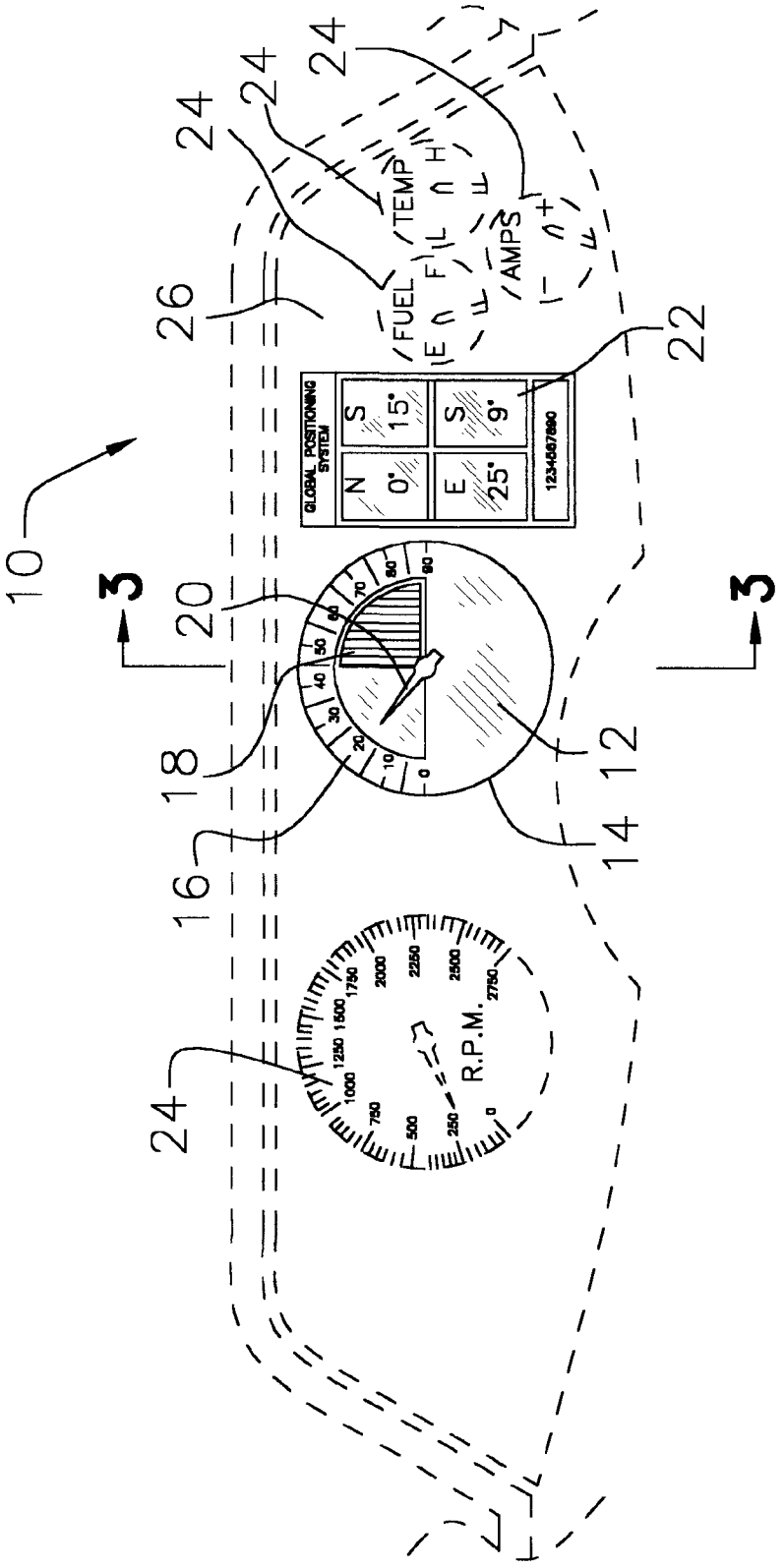

10
12
14
16
18
20
22
24
26
3
3
TEMP
FUEL
AMPS
R.P.M.
GLOBAL POSITIONING SYSTEM
N 0°
S 15°
E 25°
S 9°
1234567890

FIG. 1

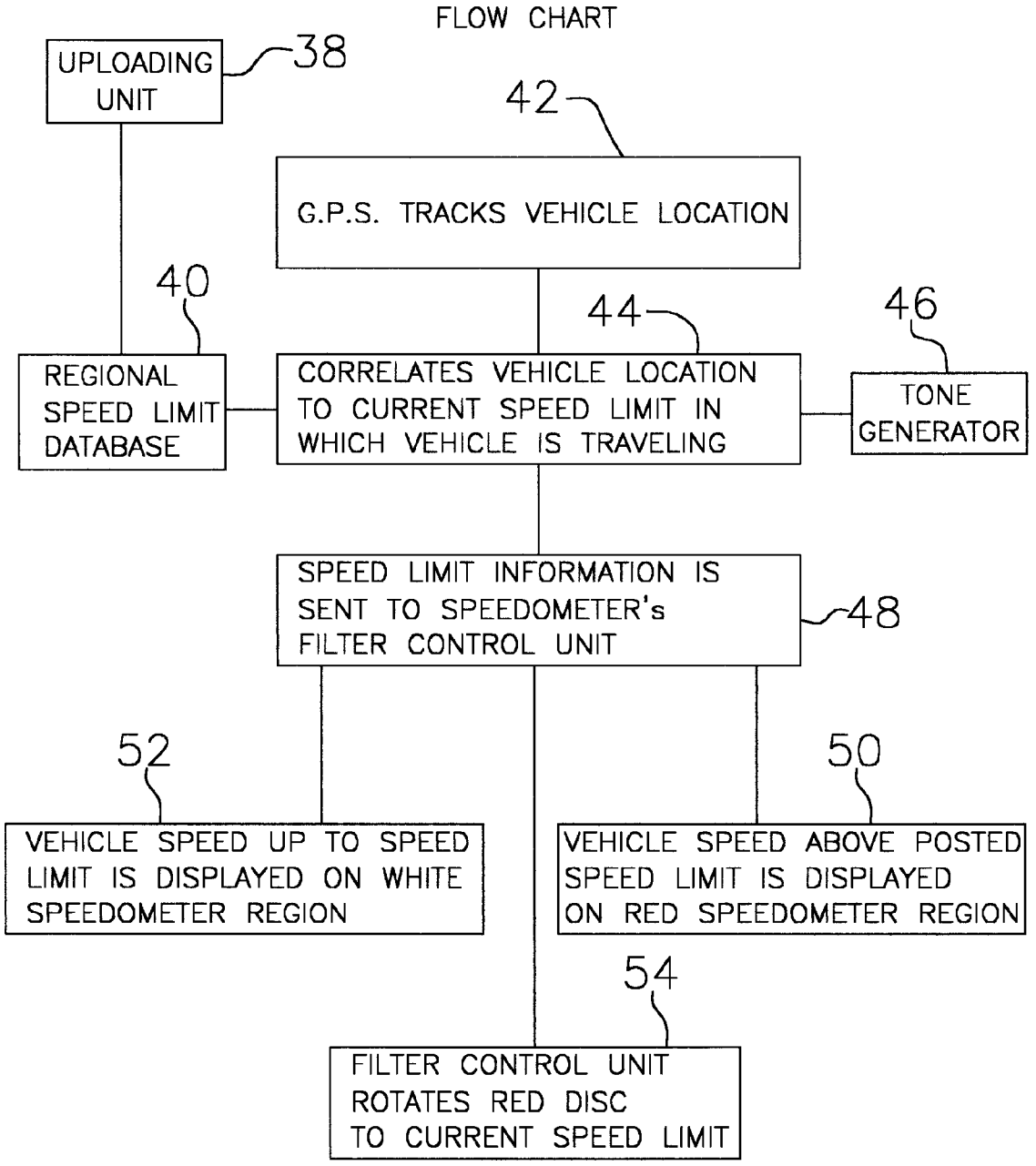

FLOW CHART
UPLOADING UNIT
38
42
G.P.S. TRACKS VEHICLE LOCATION
40
44
46
REGIONAL SPEED LIMIT DATABASE
CORRELATES VEHICLE LOCATION TO CURRENT SPEED LIMIT IN WHICH VEHICLE IS TRAVELING
TONE GENERATOR
SPEED LIMIT INFORMATION IS SENT TO SPEEDOMETER's FILTER CONTROL UNIT
48
52
50
VEHICLE SPEED UP TO SPEED LIMIT IS DISPLAYED ON WHITE SPEEDOMETER REGION
VEHICLE SPEED ABOVE POSTED SPEED LIMIT IS DISPLAYED ON RED SPEEDOMETER REGION
54
FILTER CONTROL UNIT ROTATES RED DISC TO CURRENT SPEED LIMIT

FIG. 2

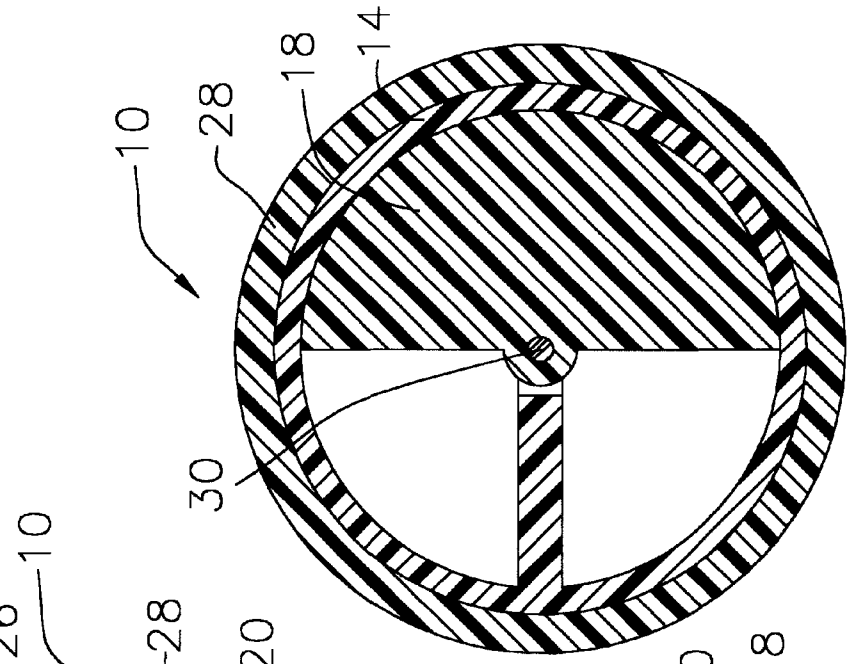


FIG. 4

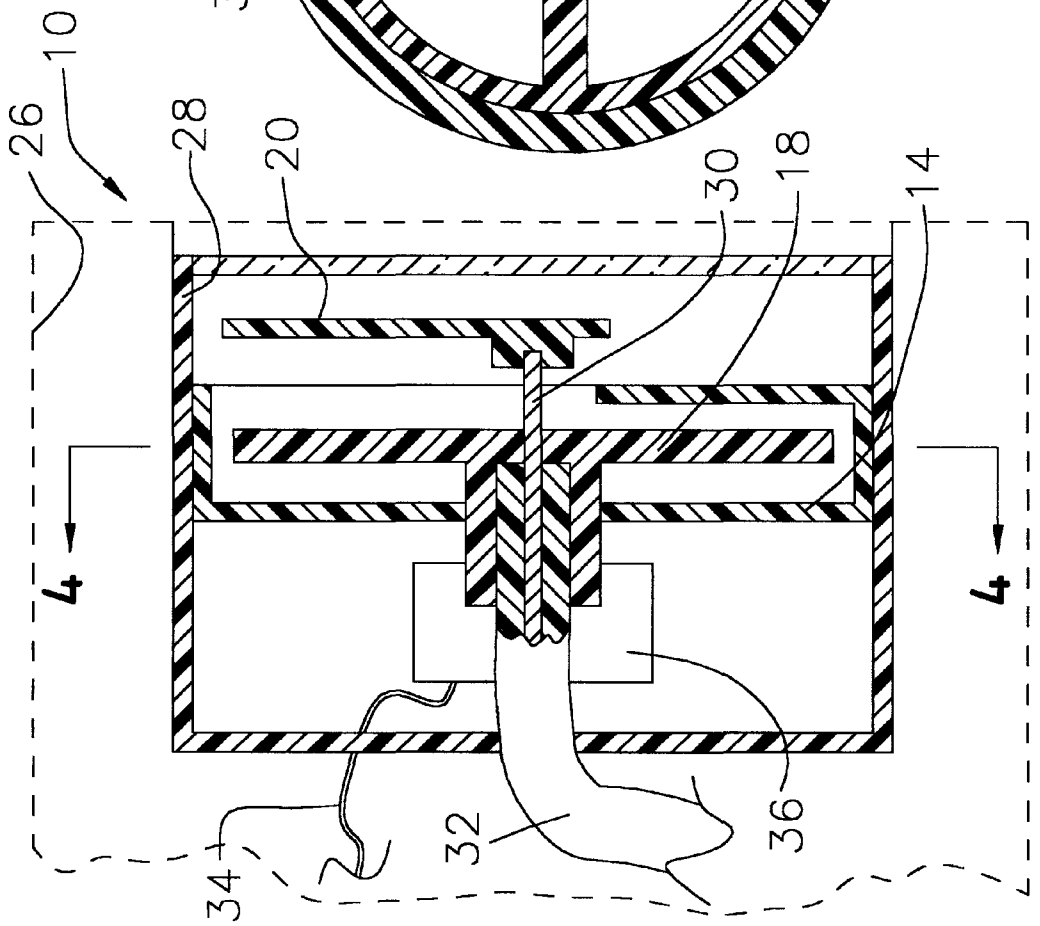


FIG. 3

SPEED LIMIT INDICATOR AND METHOD FOR DISPLAYING SPEED AND THE RELEVANT SPEED LIMIT

BACKGROUND OF THE INVENTION

1. Field of the Invention

The present invention relates to a speed limit indicator and method for displaying speed and the relevant speed limit for use in connection with vehicles. The speed limit indicator and method for displaying speed and the relevant speed limit has particular utility in connection with displaying the current speed of a vehicle and how it relates to the legal speed limit for the current location in which the vehicle is traveling.

2. Description of the Prior Art

Speed limit indicators and methods for determining speed, the relevant speed limit, and displaying same are desirable for making it easy for the driver of a vehicle to compare his current speed with the legal limit for the location in which he is traveling. This eliminates the need for the driver to take his eyes off the road to look for speed limit signs, and resolves any confusion that might exist as to what the current legal speed limit is. An audible warning of excessive speed reduces the amount of time the driver needs to spend examining the speedometer. By allowing the driver to keep his eyes on the road more of the time, the speed limit indicator reduces the chance of an accident.

The use of speed regulators is known in the prior art. For example, U.S. Pat. No. 5,485,161 to Vaughn discloses a vehicle speed control based on GPS/MAP matching of posted speeds. However, the Vaughn '161 patent does not display the current speed limit, and has further drawbacks of not allowing the driver to speed in the event of an emergency, potentially creating a more dangerous situation.

U.S. Pat. No. 5,315,295 to Fujii discloses a vehicle speed control system that decelerates a vehicle during a turn. However, the Fujii '295 patent does not display the current speed limit, and additionally does not provide an audible notification to the driver when the speed limit is being exceeded under all situations.

Similarly, U.S. Pat. No. 6,134,499 to Goode et al. discloses a road speed control system for a vehicle driven by an internal combustion engine that controls engine speed with transmission gear speed. However, the Goode et al. '499 patent does not display the current speed limit, and cannot audibly notify the driver when the speed limit is being exceeded.

Additionally, U.S. Pat. No. 5,680,306 to Shin et al. discloses a system, and method for enabling a vehicle to track a path that positions and navigates an autonomous vehicle. However, the Shin et al. '306 patent does not display the current speed limit, and has the additional deficiency of not audibly notifying the driver when the speed limit is being exceeded.

Furthermore, U.S. Pat. No. 5,995,895 to Watt et al. discloses a control of vehicular systems in response to anticipated conditions predicted using predetermined geo-referenced maps. However, the Watt et al. '895 patent does not display the current speed limit, and has the additional deficiency of not audibly notifying the driver when the speed limit is being exceeded.

In addition, U.S. Pat. No. Des. 270,339 to Boleis discloses a display plate for an electronic navigation aid. However, the Boleis '339 patent does not display the current speed limit, and does not audibly notify the driver when the speed limit is being exceeded. Lastly, U.S. Pat. No. Des. 411,122 to Velazquez discloses a vehicle speed limiting controller. However, the Velazquez '122 patent does not display the current speed limit, and has the additional deficiency of not audibly notifying the driver when the speed limit is being exceeded.

While the above-described devices fulfill their respective, particular objectives and requirements, the aforementioned patents do not describe a speed limit indicator and method for displaying speed and the relevant speed limit that allows displaying the current speed of a vehicle and how it relates to the legal speed limit for the current location in which the vehicle is traveling. The above patents make no provision for displaying the current speed limit to the driver. They also do not audibly notify the driver when the speed limit is being exceeded.

Therefore, a need exists for a new and improved speed limit indicator and method for displaying speed and the relevant speed limit that can be used for displaying the current speed of a vehicle and how it relates to the legal speed limit for the current location in which the vehicle is traveling. In this regard, the present invention substantially fulfills this need. In this respect, the speed limit indicator and method for displaying speed and the relevant speed limit according to the present invention substantially departs from the conventional concepts and designs of the prior art, and in doing so provides an apparatus primarily developed for the purpose of displaying the current speed of a vehicle and how it relates to the legal speed limit for the current location in which the vehicle is traveling.

SUMMARY OF THE INVENTION

In view of the foregoing disadvantages inherent in the known types of speed regulators now present in the prior art, the present invention provides an improved speed limit indicator and method for displaying speed and the relevant speed limit, and overcomes the above-mentioned disadvantages and drawbacks of the prior art. As such, the general purpose of the present invention, which will be described subsequently in greater detail, is to provide a new and improved speed limit indicator and method for displaying speed and the relevant speed limit for displaying the current speed of a vehicle and how it relates to the legal speed limit for the current location in which the vehicle is traveling which has all the advantages of the prior art mentioned heretofore and many novel features that result in a speed limit indicator and method for displaying speed and the relevant speed limit which is not anticipated, rendered obvious, suggested, or even implied by the prior art, either alone or in any combination thereof.

To attain this, the present invention essentially comprises a speed limit indicator comprising a speed limit display and an attached speedometer.

Also, the invention comprises a method of determining speed, the relevant speed limit, and displaying same, which comprises the steps of: upload current information to regional speed limit database, determine the vehicle's location and speed using a global positioning system receiver, obtain the speed limit for the vehicle's current location from the database, compare the vehicle's speed to the speed limit, generate a tone if the vehicle is speeding, send the speed limit to the display control unit, and modify the speed limit display to reflect which speeds are below the speed limit and which speeds exceed the speed limit.

There has thus been outlined, rather broadly, the more important features of the invention in order that the detailed

description thereof that follows may be better understood and in order that the present contribution to the art may be better appreciated.

The invention may also include a color display comprising the speed limit indicator which may take the form of a colored filter or a liquid crystal display. The speedometer may have a needle and speed denoting markings. There are, of course, additional features of the invention that will be described hereinafter and which will form the subject matter of the claims attached.

Numerous objects, features and advantages of the present invention will be readily apparent to those of ordinary skill in the art upon a reading of the following detailed description of presently current, but nonetheless illustrative, embodiments of the present invention when taken in conjunction with the accompanying drawings. In this respect, before explaining the current embodiment of the invention in detail, it is to be understood that the invention is not limited in its application to the details of construction and to the arrangements of the components set forth in the following description or illustrated in the drawings. The invention is capable of other embodiments and of being practiced and carried out in various ways. Also, it is to be understood that the phraseology and terminology employed herein are for the purpose of descriptions and should not be regarded as limiting.

As such, those skilled in the art will appreciate that the conception, upon which this disclosure is based, may readily be utilized as a basis for the designing of other structures, methods and systems for carrying out the several purposes of the present invention. It is important, therefore, that the claims be regarded as including such equivalent constructions insofar as they do not depart from the spirit and scope of the present invention.

It is therefore an object of the present invention to provide a new and improved speed limit indicator and method for displaying speed and the relevant speed limit that has all of the advantages of the prior art speed regulators and none of the disadvantages.

It is another object of the present invention to provide a new and improved speed limit indicator and method for displaying speed and the relevant speed limit that may be easily and efficiently manufactured and marketed.

An even further object of the present invention is to provide a new and improved speed limit indicator and method for displaying speed and the relevant speed limit that has a low cost of manufacture with regard to both materials and labor, and which accordingly is then susceptible of low prices of sale to the consuming public, thereby making such speed limit indicator and method for displaying speed and the relevant speed limit economically available to the buying public.

Still another object of the present invention is to provide a new speed limit indicator and method for displaying speed and the relevant speed limit that provides in the apparatuses and methods of the prior art some of the advantages thereof, while simultaneously overcoming some of the disadvantages normally associated therewith.

Even still another object of the present invention is to provide a speed limit indicator and method for displaying speed and the relevant speed limit for displaying the current speed of a vehicle and how it relates to the legal speed limit for the current location in which the vehicle is traveling. This allows the driver to always be aware of the current legal speed limit.

Still yet another object of the present invention is to provide a speed limit indicator and method for displaying speed and the relevant speed limit for displaying the current speed of a vehicle and how it relates to the legal speed limit for the current location in which the vehicle is traveling. This makes it possible to automatically notify the driver if he is speeding without requiring him to remove his eyes from the road.

A further object of the present invention is to provide a speed limit indicator and method for displaying speed and the relevant speed limit for displaying the current speed of a vehicle and how it relates to the legal speed limit for the current location in which the vehicle is traveling. This permits the driver to keep his eyes on the road instead of looking for speed limit signs and checking his speed on the speedometer, thereby reducing the chance of an accident.

An additional object of the present invention is to provide a speed limit indicator and method for displaying speed and the relevant speed limit for displaying the current speed of a vehicle and how it relates to the legal speed limit for the current location in which the vehicle is traveling. This makes it possible to maintain a current database of locations and their speed limits.

Lastly, it is an object of the present invention to provide a new and improved speed limit indicator and method for displaying speed and the relevant speed limit for displaying the current speed of a vehicle and how it relates to the legal speed limit for the current location in which the vehicle is traveling.

These together with other objects of the invention, along with the various features of novelty that characterize the invention, are pointed out with particularity in the claims annexed to and forming a part of this disclosure. For a better understanding of the invention, its operating advantages and the specific objects attained by its uses, reference should be had to the accompanying drawings and descriptive matter in which there is illustrated current embodiments of the invention.

BRIEF DESCRIPTION OF THE DRAWINGS

The invention will be better understood and objects other than those set forth above will become apparent when consideration is given to the following detailed description thereof. Such description makes reference to the annexed drawings wherein:

FIG. **1** is a top view of the current embodiment of the speed limit indicator and method for displaying speed and the relevant speed limit constructed in accordance with the principles of ID the present invention.

FIG. **2** is a block diagram of the speed limit indicator and method for displaying speed and the relevant speed limit of the present invention.

FIG. **3** is a side sectional view of the speed limit indicator and method for displaying speed and the relevant speed limit of the present invention.

FIG. **4** is a top sectional view of the speed limit indicator and method for displaying speed and the relevant speed limit of the present invention.

The same reference numerals refer to the same parts throughout the various figures.

DESCRIPTION OF THE CURRENT EMBODIMENT

Referring now to the drawings, and particularly to FIGS. **1–4**, a current embodiment of the speed limit indicator and method for displaying speed and the relevant speed limit of the present invention is shown and generally designated by the reference numeral **10**.

In FIG. **1**, a new and improved speed limit indicator and method for displaying speed and the relevant speed limit **10** of the present invention for displaying the current speed of a vehicle and how it relates to the legal speed limit for the current location in which the vehicle is traveling is illustrated and will be described. More particularly, the speed limit indicator and method for displaying speed and the relevant speed limit **10** has a speedometer **12** mounted on a dashboard **26**. Speedometer **12** has a backplate **14** made of plastic, speed denoting markings **16** painted on backplate **14**, a colored display **18** made of a red plastic filter, and a plastic needle **20** rotatably mounted in the center of backplate **14**. A global positioning receiver **22** is positioned adjacent to speedometer **12**. Other gauges **24** typically present on a dashboard **26** are shown. Note that the broken lines illustrating gauges **24** and dashboard **26** are for illustrative purposes only and are not part of the current invention.

Moving on to FIG. **2**, a new and improved speed limit indicator and method for displaying speed and the relevant speed limit **10** of the present invention for displaying the current speed of a vehicle and how it relates to the legal speed limit for the current location in which the vehicle is traveling is illustrated and will be described. More particularly, the method for displaying speed and the relevant speed limit has the following steps. Uploading unit **38** uploads current data to a regional speed limit database **40**. The global positioning system receiver **42** tracks the vehicle's location and speed, and identifies the relevant speed limit from the database for that location. The global positioning system receiver compares the vehicle's speed and the relevant speed limit **44**, and uses a tone generator **46** to generate a tone in the event that the vehicle's speed exceeds the relevant speed limit. The speed limit information is sent from the global positioning system receiver to a filter control unit **48**. The control unit adjusts the colored filter so that the speeds above the legal speed limit are displayed in red **50** while the legal speeds are displayed in white **52**. This is accomplished by the control unit rotating the red filter disc **54** to the appropriate degree.

Continuing with FIG. **3**, a new and improved speed limit indicator and method for displaying speed and the relevant speed limit **10** of the present invention for displaying the current speed of a vehicle and how it relates to the legal speed limit for the current location in which the vehicle is traveling is illustrated and will be described. More particularly, the speed limit indicator and method for displaying speed and the relevant speed limit **10** has a housing **28** containing backplate **14**, colored display **18**, axle **30**, needle **20**, and display controller **36**. The housing **28** is contained within dashboard **26**. Wire **34** connects to display controller **36**, and speedometer cable **32** connects to axle **30**.

Lastly, in FIG. **4**, a new and improved speed limit indicator and method for displaying speed and the relevant speed limit **10** of the present invention for displaying the current speed of a vehicle and how it relates to the legal speed limit for the current location in which the vehicle is traveling is illustrated and will be described. More particularly, the speed limit indicator and method for displaying speed and the relevant speed limit **10** has a backplate **14**, colored display **18**, housing **28**, and axle **30**.

While a current embodiment of the speed limit indicator and method for displaying speed and the relevant speed limit has been described in detail, it should be apparent that modifications and variations thereto are possible, all of which fall within the true spirit and scope of the invention. With respect to the above description then, it is to be realized that the optimum dimensional relationships for the parts of the invention, to include variations in size, materials, shape, form, function and manner of operation, assembly and use, are deemed readily apparent and obvious to one skilled in the art, and all equivalent relationships to those illustrated in the drawings and described in the specification are intended to be encompassed by the present invention. For example, any location determining device such as an inertial navigation system may be used instead of the global positioning system receiver described. Also, the plastic components of the speedometer could be made from any suitable material such as metal. And although a red filter disc has been described, it should be appreciated that the colored display herein described could also take the form of a liquid crystal display.

Therefore, the foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly, all suitable modifications and equivalents may be resorted to, falling within the scope of the invention.

I claim:

1. A speed limit indicator comprising:

a colored display to delineate which speed readings are in violation of the speed limit at a vehicle's current location;

a speedometer integrally attached to said colored display; and

a display controller connected to said colored display, wherein said display controller adjusts said colored display independently of said speedometer to continuously update the delineation of which speed readings are in violation of the speed limit at a vehicle's present location.

2. The speed limit indicator as defined in claim **1**, wherein said colored display is a liquid crystal display.

3. The speed limit indicator as defined in claim **1**, wherein said colored display is a colored filter.

4. The speed limit indicator as defined in claim **1**, wherein said speedometer comprises:

a needle;

an axle having opposing ends with one end attached to said needle; and

a speedometer cable having opposing ends with one end attached to said axle.

5. The speed limit indicator as defined in claim **4**, wherein said speedometer further comprises:

a backplate;

plurality of speed denoting markings affixed to said backplate; and

a housing enclosing said backplate.

6. The speed limit indicator as defined in claim **1**, wherein said speedometer comprises a liquid crystal display.

7. The speed limit indicator as defined in claim **1**, further comprising:

an electrically conductive wire having opposing ends with one end connected to said display controller; and

a speed limit locating device connected to said opposing end of said wire.

8. The speed limit indicator as defined in claim **7**, wherein said speed limit locating device comprises:

a global positioning receiver; and

a database of locations and their corresponding speed limits which is accessible by said display controller.

9. The speed limit indicator as defined in claim **1**, wherein said display controller further comprises a tone generator.

10. A speed limit indicator comprising:

a global positioning system receiver;

a display controller connected to said global positioning system receiver, wherein said display controller adjusts a colored display in response to signals from said global positioning system receiver to continuously update the delineation of which speed readings are in violation of the speed limit at a vehicle's present location; and

a speedometer integrally attached to said colored display.

11. The speed limit indicator as defined in claim **10**, wherein said global positioning system receiver further comprises a database of locations and their corresponding speed limits.

12. The speed limit indicator as defined in claim **10**, wherein said colored display is a liquid crystal display.

13. The speed limit indicator as defined in claim **12**, wherein said display controller adjusts said liquid crystal display independently of said speedometer to continuously update the delineation of which speed readings are in violation of the speed limit at a vehicle's present location.

14. The speed limit indicator as defined in claim **10**, wherein said colored display is a colored filter.

15. The speed limit indicator as defined in claim **14**, wherein said speedometer comprises:

a needle;

an axle having opposing ends with one end attached to said needle; and

a speedometer cable having opposing ends with one end attached to said axle.

16. The seed limit indicator as defined in claim **15**, wherein said speedometer further comprises:

a backplate;

a plurality of speed denoting markings affixed to said backplate; and

a housing enclosing said backplate.

17. The speed limit indicator as defined in claim **14**, wherein said display controller rotates said colored filter independently of said speedometer to continuously update the delineation of which speed readings are in violation of the speed limit at a vehicle's present location.

18. The speed limit indicator as defined in claim **10**, wherein said speedometer comprises a liquid crystal display.

19. The speed limit indicator as defined in claim **10**, wherein said display controller further comprises a tone generator.

20. A method of determining speed, the relevant speed limit, and displaying same, which comprises the steps of:

uploading current information to regional speed limit database;

determining vehicle location and speed;

obtaining speed limit for said vehicle location from said database;

comparing vehicle speed to said speed limit;

generating tone if said vehicle speed exceeds said speed limit;

sending speed limit to display control unit; and

modifying the limit indicator as defined in claim **1** to reflect which speeds are below said speed limit and which speeds exceed said speed limit.

* * * * *

CERTIFICATE OF FILING AND SERVICE

I hereby certify that, on this the 22nd day of April, 2014, I electronically filed the foregoing with the Clerk of Court using the CM/ECF System, which will send notice of such filing to the following registered users:

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I further certify that, upon acceptance and request from the Court, the required paper copies of the foregoing will be deposited with United Parcel Service for delivery to the Clerk, UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT, 717 Madison Place, N.W., Washington, D.C. 20439.

The necessary filing and service were performed in accordance with the instructions given to me by counsel in this case.

/s/ Adrienne R. Acra-Passehl
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Dated: April 22, 2014

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